

PUBLIC NOTICE

US Department of Energy - Oak Ridge Y-12 National Security Complex has applied to the Tennessee Air Pollution Control Division (TAPCD) for a significant modification to an existing major source operating permit subject to the provisions of Tennessee Comprehensive Rules and Regulations paragraph 1200-03-09-.02(11). A major source operating permit is required by both the Federal Clean Air Act and the Tennessee Comprehensive Rules and Regulations.

The applicant is US Department of Energy - Oak Ridge Y-12 National Security Complex with a site address of 301 Bear Creek Road, Oak Ridge, TN 37830. They seek to obtain a significant modification to the major source operating permit with Division identification number 01-0020/571832 for modification of a material processing facility. The proposed modification would consist of replacing a proposed large building with three smaller buildings, reducing the number of proposed emergency generators from seven to four, replacing proposed precipitation and furnace operations with a calcination process, and the relocation of some processes.

This significant modification is conducted pursuant to Tennessee Comprehensive Rules and Regulations 1200-03-09-.02(11)(f)5(iv). Only the portions of the major source operating permit affected by the significant modification are open to comment during the notice period.

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. Whether EPA's 45-day review period is performed concurrently with the public comment period or after the public comment period has ended, the deadline for citizen's petitions to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended (i.e., sequentially). The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address:

<http://www2.epa.gov/caa-permitting/caa-permitting-epas-southeastern-region>

Copies of the application materials and the draft permit are available for public inspection during normal business hours at the following locations:

Oak Ridge Public Library
Civic Center
1401 Oak Ridge Turnpike
Oak Ridge, TN 37830-6206

and

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower, 15th Floor
312 Rosa L. Parks Avenue
Nashville, TN 37243

Electronic copies of the draft permit are available by accessing the TDEC internet site located at:

<http://www.tn.gov/environment/topic/ppo-air>

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be made within thirty (30) days of the date of this notice and should be addressed to **Michelle Walker Owenby, Director, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243**. Questions concerning the source(s) may be addressed to Mr. Hernan Flores at the same address or by calling (615)-532-0593 or via email to Hernan.Flores@tn.gov. A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to participate should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such participation. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Ave. 2nd Floor, Nashville, TN 37243, 1-866-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

(Do not publish text below the dotted line)

For the "The Oak Ridger" -- published once during the time period of on or before January 22, 2019

Air Pollution Control

DATE: December 5, 2018

Assigned to –Hernan Flores

No alterations to the above are allowed:

US Department of Energy - Oak Ridge Y-12 National Security Complex **must pay to place this advertisement in the newspaper.**
Air Pollution Control must be furnished with an affidavit from the newspaper stating that the ad was run and the date of the ad or one complete sheet from the newspaper showing this advertisement, the name of the newspaper and the date of publication. Mail to Hernan Flores, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 15th Floor, 312 Rosa L. Parks Avenue, Nashville, Tennessee 37243 or send a pdf copy of this information electronically to air.pollution.control@tn.gov.

TITLE V PERMIT STATEMENT

Facility Name:	U.S. Department of Energy Oak Ridge Y-12 National Security Complex National Nuclear Security Administration
City:	Oak Ridge
County:	Anderson

Date Application Received:	July 11, 2016
Date Application Deemed Complete:	July 11, 2016

Emission Source Reference No.:	01-0020 & 01-1020
Permit No.:	571832

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to **U.S. Department of Energy, Oak Ridge Y-12 National Security Complex, National Nuclear Security Administration** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the Title V Operating Permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD -	Prevention of Significant Deterioration
NESHAP-	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
MACT -	Maximum Achievable Control Technology
NSR -	New Source Review
CAM -	Compliance Assurance Monitoring

I. Identification Information

A. Source Description:

Building 9201-1 General Machine Shops	Building 9202 – Development Activities
Building 9201-1 West – General Machine Shop	Building 9204-4 – Metal Forming & Heat Treating Process
Building 9401-3 – Steam Plant	Buildings 9215 & 9998 – Uranium Processes
Building 9409-9 – Rubber Shop	Building 9204-2 – Lithium Processes
Building 9225 – Special Materials Facility	Building 9204-2E – Assembly, Quality, Disassembly, and Storage
Building 9767-4 & 9767-13 – Brine/Methanol Systems	Building 9206 – Enriched Uranium Recovery Process
Building 9811-6 – Dry Ash Handling System	Building 9212 – Enriched Uranium Processes
Building 9401-1 – Uranium Chip Oxidation Facility	Building 9212 – Air Bearing Operations
Building 9201-5E – Production Machining Operation	
Building 9201-5N/5W – Production Machining & Plating Operations	

1. Attainment or Non-Attainment Area Location

Area *is* designated as an attainment area for all criteria pollutants.

2. Company is located in a Class II area (this means that the facility is not located within a national park or national wilderness area; see 40 CFR 52.21(e) for complete definition).

B. Regulatory Status

1. PSD/NSR

This facility *is not* a major source under PSD.

2. Title V Major Source Status by Pollutant

Pollutant	Is the pollutant emitted?	If emitted, what is the facility's status?	
		Major Source Status	Non-Major Source Status
PM	Yes	yes	
PM ₁₀	Yes	yes	
SO ₂	Yes	yes	
VOC	Yes		yes
NO _x	Yes	yes	
CO	Yes	yes	
Individual HAP	Yes	yes	
Total HAPs	Yes	yes	
GHG's	Yes		yes

3. 40 CFR PART 63 MACT/GACT Standards

This facility is not a major source for HAPs. This facility is subject to the following final 40 CFR PART 63 MACT/GACT Standards:

40 CFR 61, Subpart H

40 CFR 63, Subpart DDDDD

4. Program Applicability

Are the following programs applicable to the facility?

PSD (*no*)

NESHAP (*yes*)

NSPS (*no*)

II. Other Requirements

A. Emissions Trading

The facility *is not* involved in an emission trading program.

B. Acid Rain Requirements

This facility *is not* subject to any requirements in Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

This facility is not required to submit an accidental release plan pursuant to Section 112(r) of the CAA and TAPCR 1200-03-32.

D. Greenhouse Gas (GHG) Emissions

This facility is not a major GHG emitter.

E. Compliance Assurance Monitoring (CAM)

No PSEUs meet the general applicability criteria in 40 CFR 64.2(a).

III. Permit History

Title V Operating Permit No. 562767, was issued to this facility on January 9, 2012,

Administrative Amendment # 1 issued December 11, 2013, for a change in the Responsible Official.

Minor Permit Modification #1 issued March 3, 2014, to add Emergency Generators (Source 50), Conditions E40-1 through E40-21. Also had a revision to Compliance Plan – National Emission Standards for Hazardous Air Pollutants for Airborne Radionuclides on the Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013.

Minor Permit Modification request #2 dated August 13, 2014, (issued October 29, 2014) to remove emission source reference number 01-0020-30 from Title V permit 562767. Minor Permit Modification request #3 dated September 3, 2014 (issued October 29, 2014) to remove emission source reference number 01-1020-84 from Title V permit 562767. Both of these requests are being incorporated into one Minor Permit Modification identified as Minor Permit Modification #2.

Administrative Amendment # 2 request dated April 15, 2015, to change Technical Contact.

Operational flexibility request issued on June 16, 2015, adds emissions from Solvent 142 to the VOC emissions subject to a limit of 39 tons during any period of 12 consecutive months.

Title V Operating Permit No. 571832, was applied for with an application dated on July 6, 2016. Changes from the previous permit include:

1. Permit Condition E3-15 includes emissions from Solvent 142 to the VOC emissions subject to a limit of 39 tons during any period of 12 consecutive months, this was approved pursuant to an operational flexibility change issued on June 16, 2015
2. The Uranium Processing Facility (Source 01-0020-100) is included in the permit, from construction permit 967550P, issued on March 1, 2014.
3. Source 01-0020-03 no longer includes stacks 14 and 15, which have been removed from this emission source. There are no processes connected to these stacks.
4. An alternate streamlined particulate emissions limitation based on the more limiting Beryllium emissions limitation in Condition E3-14 has been included in Conditions E17-1 (source 01-0020-06) and E26-5 (source 01-0020-68).

IV. Public Participation Procedures

Notification of this draft permit was mailed to the following environmental agencies:

1. EPA, Region IV
2. State of Kentucky Division for Air Quality
3. Knox County Dept. of Air Pollution Control
4. State of North Carolina-Division of Environmental Management

V. Permitting Activities Since Issuance of Permit 571832

1. Administrative Permit Amendment #1 to Title V Permit 571832 issued April 13, 2018

- The document header has been revised to reflect the Administrative Amendment.
- Condition E2(c)(3) has been added to clarify that a NESHAP Annual report is required in the permit.
- The compliance methods in Conditions E3-11 and E3-12 have been revised to clarify that the Annual Radionuclide NESHAP report is required in Condition E2(c)(3).
- A section divider has been added before Condition E14-3 to clarify that Conditions E14-3 through E14-10 apply only to the emergency engines listed in Condition E14-3, unless otherwise noted.

- A section divider has been added before Condition E14-11 to clarify that Conditions E14-11 through E14-18 apply only to the emergency engines listed in Condition E14-11, unless otherwise noted.
- A section divider has been added before Condition E14-19 to clarify that Conditions E14-19 through E14-21 apply to Source 01-0020-50, unless otherwise noted.
- Condition E14-19 has been removed to reflect approval of the permittee's request, dated February 14, 2018, to remove a redundant permit condition.

2. Minor Modification #1 to Title V Permit 571832 issued September 7, 2018

- The document header has been revised to reflect the Minor Modification.
- Rule citations have been updated from "TAPCR" to "Tenn. Comp. R. & Regs."
- The Table of Contents has been revised by adding entries for new conditions D11 to D14, and by replacing the entries for E1, E2 and E30 with entries renumbered E1(MM1), E2(MM1) and E30(MM1).
- Sections A – D (the Permit Shell) has been updated.
- Condition E1 has been modified to remove the fee emissions associated with the removed equipment, and has been renumbered to E1(MM1).
- Condition E2(a)(2) has been modified to remove the requirement for reporting visible emissions evaluation readings associated with the removed equipment. Condition E2 has been renumbered to E2(MM1).
- Condition E2(c)(2) has been removed, the permit has no conditions requiring submittal of a NSPS semiannual report, subsequent parts of Condition E2 (now E2(MM1)) have been renumbered.
- The description box for Emission Source Reference Number 01-0020-05 before Conditions E30-1 through E30-6 has been modified by removing the "44," from the list of numbers in parenthesis in the left-side cell, and by adding "Minor Modification #1: Stack 44 process equipment has been removed from operation as a result of permittee request dated November 16, 2017" to the end of the right-side cell.
- Condition E30-4 has been modified by removing the "44," from the list of emission points, and is renumbered as Condition E30-4(MM1).

3. Operational Flexibility Change #1 to Title V Permit 571832 issued October 11, 2018

- In a letter dated September 25, 2018, the permittee requested to use an existing laboratory hood which has been modified for a lithium recovery process. The requested addition of the existing laboratory hood process to the subject emission source meets the criteria of Title V operational flexibility changes/requirements, and was approved in a letter dated October 11, 2018.

4. Minor Modification #2 to Title V Permit 571832 issued December 14, 2018

- The document header has been revised to reflect the Minor Modification.
- The description box for Emission Source Reference Number 01-1020-72 before Conditions E28-1 through E28-6 has been modified by adding "Minor Modification #2: Add a Calciner Process Operation to Stack 134 of Emission Source Y-9212-A as a result of permittee request dated August 29, 2018" to the end of the right-side cell.

5. Significant Modification #1 to Title V Permit 571832 issued **DATE_TBD**

- The document header has been revised to reflect the Significant Modification.
- The Table of Contents has been revised by adding entries for attachments #4 through #7, and by replacing the entries for E1(MM1), E2(MM1), E11, and E18 with entries renumbered E1(SM1), E2(SM1), E11(SM1), and E18(SM1).
- Condition E1(MM1) has been modified to reflect the changes due to construction permit 974225 and has been renumbered to E1(SM1).
- Condition E2(MM1)(a)2 has been modified to add Condition E30-6 to the list of conditions requiring visible emission evaluation readings and has been renumbered to E2(SM1)(a)(2).
- Condition E2(MM1)(c)1 has been modified to add an applicable requirement from construction permit 974225 and has been renumbered to E2(SM1)(c)1.
- Condition E3-1 has been modified to revise the list of application dates and has been renumbered to E3-1(SM1).
- Condition E3-4 has been modified to add an insignificant activity and has been renumbered to E3-4(SM1).
- Condition E3-6 has been modified to revise the list of application dates and has been renumbered to E3-6(SM1).
- Condition E3-9 has been modified to revise a rule citation and has been renumbered to E3-9(SM1).
- Condition E3-11 has been modified to clarify that the facility will comply with the limit in Condition 3-12 in lieu of a limit under 1200-03-07-.01(5) and has been renumbered to E3-11(SM1).
- Condition E3-12 has been modified to reflect the changes due to construction permit 974225 and has been renumbered to E3-12(SM1).
- Condition E3-13 has been modified to reflect the changes due to construction permit 974225 and has been renumbered to E3-13(SM1).
- Condition E3-14 has been modified to remove source 01-1020-84, no longer at the facility, and has been renumbered to E3-14(SM1).
- Conditions E3-16(SM1) and E3-17 have been added to add applicable requirements from construction permit 974225.
- Condition E11-1 has been modified to incorporate language from the gas 1 fuel subcategory definition in 40 CFR Part 63, Subpart DDDDD for clarity, and has been renumbered to E11-1(SM1).
- Condition E11-2(1)(vi) has been modified to revise a typographical error and has been renumbered to E11-2(SM1)(1)(vi).
- Condition E11-11 has been modified to revise a typographical error and has been renumbered to E11-11(SM1).
- Condition E11-13 has been modified to incorporate language from the gas 1 fuel subcategory definition in 40 CFR Part 63, Subpart DDDDD for clarity, and has been renumbered to E11-13(SM1).
- Condition E11-14 has been modified to revise a typographical error and has been renumbered to E11-14(SM1).
- Condition E11-15 has been modified to revise a typographical error and has been renumbered to E11-15(SM1).
- Condition E11-16 has been modified to revise a typographical error and has been renumbered to E11-16(SM1).

- Condition E11-17 has been modified to revise a typographical error and has been renumbered to E11-17(SM1).
- Conditions E18-1, E18-3 through E18-16, and E18-18 through E18-23 have been modified to incorporate requirements from construction permit 974225 and have been renumbered to E18-1(SM1), E18-3(SM1) through E18-16(SM1), etc.
- Construction permit 974225 was issued on September 14, 2018, for design changes to the Uranium Process Facility prior to commencement of construction. The primary changes are:
 1. Replacement of one large process building with three smaller, state-of-the-art process facilities.
 2. Reduction of emergency/standby generators from seven to four.
 3. Replacement of the precipitation and furnace operations with a calcination process.
 4. The relocation of some processes from UPF to other existing facilities at Y-12.

STATE OF TENNESSEE
AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243



Significant Modification #1 to
OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Comprehensive Rules and Regulations (Tenn. Comp. R. & Regs.). The permittee has been granted permission to operate an air contaminant source in accordance with emission limitations, monitoring requirements set forth herein.

Date Issued: December 1, 2017

Permit Number: 571832

Date of Administrative Amendment #1: April 13, 2018

Date of Minor Modification #1: September 7, 2018

Date of Minor Modification #2: December 14, 2018

Date of Significant Modification #1: **DATE TBD**

Date Expires: November 30, 2022

Issued To:

U.S. Department of Energy
Oak Ridge Y-12 National Security Complex
National Nuclear Security Administration

Installation Address:

Bear Creek Road
Oak Ridge

Installation Description:

General Machine Shops - Bldgs 9201-1 & 9201-1W
Rubber Shop - Bldg 9204-2
Air Bearing Operations - Bldg 9212
Uranium Chip Oxidation Facility - Bldg 9401-5
Steam Plant - Bldg 9401-7
Brine/Methanol Systems - Bldgs 9767-4 & 9767-13
Emergency Engines (generators)
Production Machining - Bldgs 9201-5W & 9201-5N
Development Activities - Bldg - 9202

Uranium Processing Facility - Bldgs 9226 & 9424-4
Uranium Processes - Bldg 9998
Metal Forming & Heat Treating Process - Bldg 9998
Lithium Processes - Bldg 9204 -2
Assembly, Quality, Disassembly, and Storage - Bldg 9204-2E
Enriched Uranium Recovery Process - Bldg 9206
Enriched Uranium Processes - Bldg 9212
Uranium Processes - Bldg 9215
Special Materials Facility - Bldg 9225-3

Emission Source Reference No.: 01-0020 & 01-1020

Renewal Application Due Date:

Between March 5, 2022 and June 3, 2022

Primary SIC: 34

Information Relied Upon:

Applications dated June 28, 2016, July 6, 2016, September 21, 2017, and October 4, 2017
Administrative Amendment Application dated February 14, 2018
Insignificant Activity Declaration dated March 15, 2018
Minor Modification Application dated June 4, 2018
Minor Modification Application dated August 29, 2018
Significant Modification Application dated March 22, 2018 and May 24, 2018

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

3/8/2018

RDA-1298

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SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

- A1. Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

Tenn. Comp. R. & Regs. 1200-03

- A2. Compliance requirement.** All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act. The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

- A3. Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(vi)(II)

- A4. The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(vi)(III)

- A5. Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(vi)(IV)

- A6. Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(vi)(V)

- A7. Severability clause.** The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

Tenn. Comp. R. & Regs. 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

(a) The permittee shall pay an annual Title V emission fee based upon the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.

(b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.

(c) When paying annual Title V emission fees, the permittee shall comply with all provisions of 1200-03-26-.02 and 1200-03-09-.02(11) applicable to such fees.

(d) Where more than one (1) allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant under 40 CFR 60, 61, or 63 will place such regulated emissions in the regulated hazardous air pollutant (HAP) category.

2. A category of miscellaneous HAPs shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that are not subject to federally promulgated hazardous air pollutant standards under 40 CFR 60, 61, or 63.

3. HAPs that are also in the family of volatile organic compounds, particulate matter, or PM₁₀ shall not be placed in either the regulated HAP category or miscellaneous HAP category.

4. Sources that are subject to a provision of chapter 1200-03-16 New Source Performance Standards (NSPS) or chapter 0400-30-39 Standards of Performance for New Stationary Sources for pollutants that are neither particulate matter, PM₁₀, sulfur dioxide (SO₂), volatile organic compounds (VOC), nitrogen oxides (NO_x), or hazardous air pollutants (HAPs) will place such regulated emissions in an NSPS pollutant category.

5. The regulated HAP category, the miscellaneous HAP category, and the NSPS pollutant category are each subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

6. Major sources that wish to pay annual emission fees for PM₁₀ on an allowable emission basis may do so if they have a specific PM₁₀ allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM₁₀ emission basis, it may do so if the PM₁₀ actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM₁₀ emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM₁₀ emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM₁₀ emissions.

Tenn. Comp. R. & Regs. 1200-03-26-.02 and 1200-03-09-.02(11)(e)1(vii)

- A9. Permit revision not required.** A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(viii)

- A10. Inspection and entry.** Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or an authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

(a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

- (c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (d) As authorized by the Clean Air Act and Chapter 1200-03-10 of Tenn. Comp. R. & Regs., sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(ii)

A11. Permit shield.

- (a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:
 - 1. Such applicable requirements are included and are specifically identified in the permit; or
 - 2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
- (b) Nothing in this permit shall alter or affect the following:
 - 1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;
 - 2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - 3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
 - 4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.
- (c) Permit shield is granted to the permittee.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)6

A12. Permit renewal and expiration.

- (a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.
- (b) Provided that the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).
- (c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

- (a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:
 - 1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.
 - 2. Additional requirements become applicable to an affected source under the acid rain program.
 - 3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - 4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.

(c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.

(d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:

1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90 day time period.
2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.
3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).
4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)6 and 7.

A14. Permit transference. An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:

- (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
- (b) written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

A15. Air pollution alert. When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in Tenn. Comp. R. & Regs. 1200-03-09-.03(1) and Tenn. Comp. R. & Regs. 1200-03-15-.03.

A16. Construction permit required. Except as exempted in Tenn. Comp. R. & Regs. 1200-03-09-.04, or excluded in subparagraph Tenn. Comp. R. & Regs. 1200-03-02-.01(1)(aa) or subparagraph Tenn. Comp. R. & Regs. 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

Tenn. Comp. R. & Regs. 1200-03-09-.01(1)(a)

A17. Notification of changes. The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.

- (a) change in air pollution control equipment
- (b) change in stack height or diameter
- (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

Tenn. Comp. R. & Regs. 1200-03-09-.02(7)

- A18. Schedule of compliance.** The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. Title VI.

(a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.

(b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

(c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program(SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

- A20. 112 (r).** The permittee shall comply with the requirement to submit to the Administrator or designated State Agency a risk management plan, including a registration that reflects all covered processes, by June 21, 1999, if the permittee's facility is required pursuant to 40 CFR, 68, to submit such a plan.

SECTION B

GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

- B1. Recordkeeping.** Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.
- (a) Where applicable, records of required monitoring information include the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The company or entity that performed the analysis;
 4. The analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- (b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.
- Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)
- B2. Retention of monitoring data.** The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
- Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)(II)II
- B3. Reporting.** Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.
- Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)
- B4. Certification.** Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(d)4
- B5. Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):
- (a) The identification of each term or condition of the permit that is the basis of the certification;
 - (b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
 - (c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
 - (d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

B6. Submission of compliance certification. The compliance certification shall be submitted to:

The Tennessee Department of Environment and Conservation Environmental Field Office specified in Section E of this permit	and	Air Enforcement and Toxics Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
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Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3(v)(IV)

B7. Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.

2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

(a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards

will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.

(b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.

(c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

1. Stack or emission point involved
2. Time malfunction, startup, or shutdown began and/or when first noticed
3. Type of malfunction and/or reason for shutdown
4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

Tenn. Comp. R. & Regs. 1200-03-20-.03 and .04

B9. Malfunctions, startups and shutdowns - reasonable measures required. The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

Tenn. Comp. R. & Regs. 1200-03-20-.02

B10. Reserved.

B11. Report required upon the issuance of a notice of violation for excess emissions. The permittee must submit within twenty (20) days after receipt of the notice of violation, the data required below. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty (20) day time period. The minimum data requirements are:

- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
- (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
- (c) The time and duration of the emissions;
- (d) The nature and cause of such emissions;
- (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
- (f) The steps taken to limit the excess emissions during the occurrence reported, and
- (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty (20) day period specified shall preclude the admissibility of the data for determination of potential enforcement action.

Tenn. Comp. R. & Regs. 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

- C1. Operational flexibility changes.** The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:
- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
 - (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
 - (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
 - (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
 - (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
 - (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
 - (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(a)4 (ii)

- C2. Section 502(b)(10) changes.**
- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7 day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
 - (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - 3. a declaration and quantification of any change in emissions;
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.
 - (c) The permit shield provisions of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(a)4 (i)

- C3. Administrative amendment.**
- (a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.
 - (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e), Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f) and Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(g) for significant permit modifications.
 - (c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)4

- C4. Minor permit modifications.**
- (a) The permittee may submit an application for a minor permit modification in accordance with Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(ii).

- (b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
- (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.
- (d) Minor permit modifications do not qualify for a permit shield.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

- (a) The permittee may submit an application for a significant modification in accordance with Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(iv).
- (b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of Tenn. Comp. R. & Regs. 1200-03-09-.01 shall be governed by the following:

- (a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.
- (b) Sources desiring the permit shield shall choose the administrative amendment route of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)4 or the significant modification route of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(iv).
- (c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(d) 1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

- D1. Visible emissions.** With the exception of air emission sources exempt from the requirements of Tenn. Comp. R. & Regs. Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six minute period per one (1) hour of not more than forty (40) percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.
- Consistent with the requirements of Tenn. Comp. R. & Regs. Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under Tenn. Comp. R. & Regs. 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or an authorized representative upon request.
- Tenn. Comp. R. & Regs. 1200-03-05-.01(1), Tenn. Comp. R. & Regs. 1200-03-05-.03(6) and Tenn. Comp. R. & Regs. 1200-03-05-.02(1)
- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.
- Tenn. Comp. R. & Regs. 1200-03-06-.03(2)
- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in Tenn. Comp. R. & Regs. 1200-03-06.
- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.
- Tenn. Comp. R. & Regs. 1200-03-07-.07(2)
- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in Tenn. Comp. R. & Regs. 1200-03-07.
- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in Tenn. Comp. R. & Regs. 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.
- D7. Fugitive Dust.**
- (a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:
1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
 2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stock piles, and other surfaces which can create airborne dusts;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

Tenn. Comp. R. & Regs. 1200-03-08

D8. Open burning. The permittee shall comply with the Tenn. Comp. R. & Regs. 1200-03-04 for all open burning activities at the facility.

Tenn. Comp. R. & Regs. 1200-03-04

D9. Asbestos. Where applicable, the permittee shall comply with the requirements of Tenn. Comp. R. and Regs. 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

Tenn. Comp. R. & Regs. 1200-03-11-.02(2)(d) and 40 CFR, Part 61

D10. Annual certification of compliance. The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

D11. Emission Standards for Hazardous Air Pollutants. When applicable, the permittee shall comply with the Tenn. Comp. R. & Regs. 0400-30-38 for all emission sources subject to a requirement contained therein.

Tenn. Comp. R. & Regs. 0400-30-38

D12. Standards of Performance for New Stationary Sources. When applicable, the permittee shall comply with the Tenn. Comp. R. & Regs. 0400-30-39 for all emission sources subject to a requirement contained therein.

Tenn. Comp. R. & Regs. 0400-30-39

D13. Gasoline Dispensing Facilities. When applicable, the permittee shall comply with the Tenn. Comp. R. & Regs. 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

D14. Internal Combustion Engines.

- (a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of Tenn. Comp. R. & Regs. 0400-30-38-.01.
- (b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of Tenn. Comp. R. & Regs. 0400-30-39-.01.
- (c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of Tenn. Comp. R. & Regs. 0400-30-39-.02.

Tenn. Comp. R. & Regs. 0400-30-38 and 39

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, AND MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

E1(SM1). Fee payment:

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 01-0020 & 01-1020

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	213.09	AEAR	Includes all fee emissions.
PM ₁₀	N/A	N/A	
SO ₂	39.11	AEAR	Includes all fee emissions.
VOC	158.95	AEAR	Includes all fee emissions.
NO _x	367.85	AEAR	Includes all fee emissions.
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAP WITHOUT A STANDARD)*			
VOC FAMILY GROUP	49	AEAR	Fee emissions are included in VOC above.
NON-VOC GASEOUS GROUP	37.00	AEAR	TENN. COMP. R. & REGS. 1200-03-26-.02(2)(d)3. Fee emissions are not included above.
PM FAMILY GROUP	N/A	N/A	
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAP WITH A STANDARD)**			
VOC FAMILY GROUP	N/A	N/A	
NON-VOC GASEOUS GROUP	N/A	N/A	
PM FAMILY GROUP	2.00	AEAR	NESHAP (40 CFR Part 61 Subpart H). Fee emissions are included in PM above.
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT NOT LISTED ABOVE	N/A	N/A	

NOTES

AAP The **Annual Accounting Period (AAP)** is a twelve (12) consecutive month period that **either (a) begins each July 1st and ends June 30th of the following year when fees are paid on a fiscal year basis, or (b) begins January 1st and ends December 31st of the same year when fees are paid on a calendar year basis.** The **Annual Accounting Period** at the time of permit significant modification issuance **began January 1, 2019, and ends December 31, 2019.** The next Annual Accounting Period begins **January 1, 2020,** and ends **December 31, 2020** unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) and approved by the Technical Secretary. If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b), the responsible official must submit the request to the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions.

N/A N/A indicates that no emissions are specified for fee computation.

AEAR If paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **Actual Emissions Analysis** is Required to determine the actual emissions of:

- (1) **each regulated pollutant** (Particulate matter, SO₂, VOC, NO_x and so forth. See Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) **each pollutant group** (VOC Family, Non-VOC Gaseous, and Particulate Family), and

- (3) the **Miscellaneous HAP Category**
- (4) the **Specific HAP Category, and**
- (5) the **NSPS Category**

under consideration during the Annual Accounting Period.

* **Category Of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, the **Miscellaneous HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

** **Category Of Specific HAP (HAP With A Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

*** **Category Of NSPS Pollutants Not Listed Above:** This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the **PM, SO₂, VOC or NO_x** emissions from each source in this permit. **For fee computation**, each **NSPS pollutant not listed above** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

END NOTES

- The permittee shall:**
- (1) Pay Title V **annual emission fees**, on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(g). Fees may be paid on an **actual, allowable, or mixed** emissions basis; and on either a **state fiscal year** or a **calendar year**, provided the requirements of 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under Tenn. Comp. R. & Regs. 1200-03-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in Tenn. Comp. R. & Regs. 1200-03-26-.02(8).
 - (2) Sources paying annual emissions fees on an allowable emissions basis: pay annual allowable based emission fees for each annual accounting period pursuant to Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(d).
 - (3) Sources paying annual emissions fees on an actual emissions basis: prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
 - (a) the completed **Fee Emissions Summary Table**,
 - (b) each **actual emissions analysis** required, and
 - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. These calculations must be based on the annual fee basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analyses** required by the above **Fee Emissions Summary Table**.
 - (4) Sources paying annual emissions fees on a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:

- (a) the completed **Fee Emissions Summary Table**,
- (b) each **actual emissions analysis** required, and
- (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. These calculations must be based on the fee bases approved by the Technical Secretary (payment on an actual or mixed emissions basis) and payment on a state fiscal year (July 1 through June 30) or a calendar year (January 1 through December 31). These records shall be used to complete the **actual emissions analysis**.

For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(d).

- (5) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full.

Payment of the fee due and the actual emissions analysis (if required) shall be submitted to The Technical Secretary at the following address:

Payment of Fee to:

The Tennessee Department of Environment and Conservation
Division of Fiscal Services
Consolidated Fee Section – APC
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 10th Floor
Nashville, Tennessee 37243

Actual Emissions Analyses to:

The Tennessee Department of Environment and Conservation
Division of Air Pollution Control
Emissions Inventory Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, Tennessee 37243

or

An electronic copy (PDF) of actual emissions analysis can also be submitted to: apc.inventory@tn.gov

Tenn. Comp. R. & Regs. 1200-03-26-.02 (3) and (9), and 1200-03-09-.02(11)(e)1 (iii) and (vii)

E2(SM1). Reporting requirements.

- (a) **Semiannual reports.** These reports shall cover the following 6-month periods; April 1 through September 30 and October 1 through March 31 and these reports shall be submitted within 60 days after the end of each 6-month period.

These semiannual reports shall include:

1. Any monitoring and recordkeeping required by **Conditions E3-14(SM1), E3-15, E11-14(SM1), E11-15(SM1), E11-16(SM1), E11-17(SM1), E11-19, and E35-1** of this permit. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
2. The visible emission evaluation readings from **Conditions E4-4, E5-3, E6-4, E7-6, E8-3, E9-4, E10-3, E11-20, E12-2, E13-2, E14-20, E15-5, E16-2, E17-2, E18-15(SM1), E19-4, E20-4, E21-4, E22-3, E23-3, E24-3, E25-3, E26-4, E27-4, E28-6, E29-5, E30-6, E31-4, E32-4, E33-5, E34-3, and E35-3**, of this permit if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
3. Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**.

These reports must be certified by a responsible official consistent with Condition B-4 of this permit and shall be submitted to the Technical Secretary at the address in Condition E2(SM1)(b) of this permit.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii)

- (b) **Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and

conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

1. The identification of each term or condition of the permit that is the basis of the certification;
2. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
3. The status of compliance with each term or condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in **E2(SM1)(b)2** above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
4. Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

The first certification to be submitted following issuance of this permit shall cover the 12-month period from April 1, 2017 to March 31, 2018 and shall be submitted within 60 days after the 12-month period ending March 31, 2018. Subsequent certifications shall be submitted within 60 days after the end of each 12-month period following the first certification.

These certifications shall be submitted to **TN APCD and EPA at the following addresses:**

The Technical Secretary
Division of Air Pollution Control
Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, Tennessee 37921

Air and EPCRA Enforcement Branch
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303

(or electronic pdf copy to: APC.KnoxEFO@TN.gov)

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

(c) **NESHAP Reporting Requirements.** The permittee must submit NESHAP reports as follows:

1. **40 CFR Part 61, Subpart H Annual Reports:** The Oak Ridge Reservation Annual Radionuclide NESHAP (40 CFR Part 61, Subpart H) report required by **Conditions E3-11(SM1) and E3-12(SM1)** shall continue to be submitted annually, for each calendar year period, and submitted by June 30 following the calendar year covered by the report. Facilities designated under 40 CFR Part 61 Subpart H are exempt from the reporting requirements of 40 CFR §61.10.

These reports must be certified by a responsible official consistent with Condition B-4 of this permit and shall be submitted to the Technical Secretary at the address in Condition E2(SM1)(b) of this permit.

2. **40 CFR Part 63, Subpart DDDDD Annual Reports:** The permittee must submit the Annual Compliance Report

required in **Condition E11-9**.

These reports must be certified by a responsible official consistent with Condition B-4 of this permit and shall be submitted to the Technical Secretary at the address in Condition E2(SM1)(b) of this permit.

GENERAL PERMIT CONDITIONS

Conditions E3-1(SM1) through E3-15 apply to all sources in this permit, unless otherwise indicated.

E3-1(SM1). Identification of Responsible Official, Technical Contact, and Billing Contact

a) The applications that were utilized in the preparation of this permit are dated June 28, 2016, July 6, 2016, September 21, 2017, October 4, 2017, February 14, 2018, March 15, 2018, March 22, 2018, May 24, 2018, June 4, 2018, and August 29, 2018. The September 21, 2017, application is for the signature by Responsible Official Eugene P Sievers, Director, Y-12 Environment, Safety and Health, Consolidated Nuclear Security, LLC (CNS) (operator of the permitted facility). The July 6, 2016,, application is also signed by Responsible Official Susan D. Morris, Assistant Manager, National Nuclear Security Administration Production Office, U.S. Department of Energy, Oak Ridge Y-12 National Security Complex (owner of the permitted facility) and identifies Susan D. Morris as the Responsible Official Contact for the owner of the permitted facility. The March 22, 2018, and May 24, 2018, applications request a significant modification to the permit and are also signed by Eugene P Sievers and Susan D. Morris. If any of these persons terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.

b) The applications that were utilized in the preparation of this permit are dated June 28, 2016, July 6, 2016, September 21, 2017, October 4, 2017, February 14, 2018, March 15, 2018, March 22, 2018, May 24, 2018, June 4, 2018, and August 29, 2018. The September 21, 2017, application identifies James P. Donnelly and Bradley E. Skaggs, as the Principal Technical Contacts for the permitted facility. If any of these persons terminates employment or is assigned different duties and is no longer a Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.

c) The applications that were utilized in the preparation of this permit are dated June 28, 2016, July 6, 2016, September 21, 2017, October 4, 2017, February 14, 2018, March 15, 2018, March 22, 2018, May 24, 2018, June 4, 2018, and August 29, 2018. The September 21, 2017, application identifies Eugene P Sievers, as the Billing Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

E3-2. Accidental Release Plan: The permittee is not required to file an accidental release plan pursuant to Section 112(r) of the Clean Air Act and Chapter 1200-03-32 of the Tenn. Comp. R. & Regs.

Tenn. Comp. R. & Regs. 1200-03-32

E3-3. Compliance Assurance Monitoring: This facility is not subject to the requirements of 40 CFR Part 64 (Compliance Assurance Monitoring).

Tenn. Comp. R. & Regs. 1200-03-09-.03(8) and 40 CFR Part 64

E3-4(SM1). **Insignificant activities:** Insignificant activities identified in the Title V application per Rules 1200-03-09-.04(5) and 1200-03-04-.04(1) of the Tennessee Air Pollution Control Regulations are listed below. Additional insignificant activities may be added and operated at any time with the provision that a written notification shall be submitted to the Technical Secretary including an updated APC V.2 application form with a Truth, Accuracy, and Completeness statement signed by a responsible official. The permit may be updated to include additional insignificant sources by means of an administrative amendment if necessary. The addition of insignificant activities which are identified as insignificant per rules 1200-03-09-.04(5)f or (g) of the Tenn. Comp. R. & Regs. does not require notification to the Division of Air Pollution Control.

Activity or Emissions Unit	Rule (Tenn. Comp. R. & Regs.) for Insignificant or Exempt Status
Y-12 Complex Emission Sources/Activities with a potential to emit less than 5 tons per year of each regulated air pollutant, and less than 1,000 pounds per year of each hazardous air pollutant. The emission sources are listed as an activity under this rule.	1200-03-09-.04(5)(a)4.(i)
Building 9995 Plant Laboratory Activities (laboratory equipment and hoods, etc.) and Research and Development Activities.	1200-03-09-.04(5)(f)19.
Activities listed in ATTACHMENT #3 to this permit.	1200-03-09-.04(5)(a)4.(iv)
Any air emissions from an emissions unit or activity at a stationary source for which the emissions unit or activity has a potential to emit less than 5 tons per year of each regulated air pollutant, and less than 1,000 pounds per year of each hazardous air pollutant. Such emission units and activities or types of emission units and activities must be listed in the permit application.	1200-03-09-.04(5)(a)4.(i)
Laboratory equipment, used for research and development or for chemical and physical analyses, including ventilating and exhaust systems for laboratory hoods used for air contaminants.	1200-03-09-.04(5)(f)19.
Any emission unit with the potential to emit radionuclides which will result in a dose to the most exposed member of the public of less than 0.1 millirems per year.	1200-03-09-.04(5)(a)4.(iv)
Paved/ unpaved roads and parking areas	1200-03-09-.04(5)(f) 1 and 2
Gasoline Dispensing Facility	1200-03-09-.04(5)(a)4.(i)

Tenn. Comp. R. & Regs. 1200-03-09-.04(5) and Tenn. Comp. R. & Regs. 1200-03-04-.04(1)

E3-5. The permittee shall comply with all applicable federal and state regulations concerning the operation of the sources in this permit. This includes but is not limited to federal regulations published under 40 CFR Part 63 for sources of hazardous air pollutants and 40 CFR Part 60, New Source Performance Standards.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

E3-6(SM1). The sources in this permit shall operate in accordance with the terms of this permit and the information submitted in the approved application.

Tenn. Comp. R. & Regs. 1200-03-09-.02(6) and the applications dated June 28, 2016, July 6, 2016, September 21, 2017, October 4, 2017, February 14, 2018, March 15, 2018, March 22, 2018, May 24, 2018, June 4, 2018, and August 29, 2018

E3-7. **Recordkeeping:** If required by the conditions of this permit, recordkeeping requirements for this source, including all data and calculations, must be updated and maintained based on the following schedule:

Record Keeping Type

Monthly Log

Update Requirement

Recorded within 30 days after the end of the month

Record Keeping Type

Weekly Log

Daily Log

Update Requirement

Recorded within 7 days after the end of the week

Recorded within 7 days after the end of the day

All logs and records specified in this permit shall be made available upon request by the Technical Secretary or representative, recorded in a permanent suitable format, and retained at the source location for a period of not less than five (5) years unless otherwise noted. All logs and records specified in this permit are based on a recommended format. Any logs that have an alternative format may be utilized provided such logs contain the same information that is required. Computer-generated logs are also acceptable. Logs and records are not required to be submitted semiannually unless specified in **Condition E2(SM1)**.

Tenn. Comp. R. & Regs. 1200-03-10-.02(2)(a), 1200-03-10-.04(2)(b) and 1200-03-09-.02(11)(e)1.(iii)

E3-8. Visible Emissions:

a) Unless otherwise indicated, visible emissions from the sources at this facility shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

Tenn. Comp. R. & Regs. 1200-03-05-.03(6) and Tenn. Comp. R. & Regs. 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii)

E3-9(SM1). All air pollution control devices required by this permit shall be operating when the equipment served by the devices are in operation. Upon the malfunction/failure of any emission control device(s) serving a particular source, the operation of the process(es) served by the device(s) shall be regulated by Chapter 1200-03-20 of the Tennessee Air Pollution Control Regulations. This also applies to any excess emissions due to start-up and shutdowns.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

Compliance Method: Following the requirements as identified in Tenn. Comp. R. & Regs. 1200-03-20. Compliance with this condition shall be assured based on information available to the Technical Secretary which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source

E3-10. Routine maintenance as required to comply with the specified emission limits shall be performed on the air pollution control devices covered by **Condition E3-9(SM1)**. Monthly logs of maintenance and/or repairs for these control devices shall be kept. The logs shall denote what maintenance and what repair was done, when it was done, by whom, and when problems were rectified denoting time and date accomplished. Computer-generated logs are also acceptable. Each maintenance/repair log must be made available upon request by the Technical Secretary or representative. Such logs must be maintained for five (5) years. Records from these logs are not required to be submitted semiannually unless required in **Condition E2(SM1)(a)1** or under MACT reporting.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04

Compliance Method: Compliance with this condition shall be assured based on information available to the Technical Secretary which may include, but is not limited to, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

E3-11(SM1). Radionuclides (other than Radon) sources: This facility is subject to the requirements of 40 CFR 61, subpart H - National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities. The following sources will meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition** Error! Reference source not found. in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources. This emission limitation is established pursuant to the information contained in the Title V permit renewal application dated July 6, 2016.

National Nuclear Security Administration Sources						
01-0020-32	01-0020-13	01-1020-12	01-0020-68	01-0020-03	01-1020-72	01-0020-02
01-0020-05	01-0020-37	01-1020-51	01-1020-52	01-1020-53		

Tenn. Comp. R. & Regs. 1200-03-07-.01(5) and Tenn. Comp. R. & Regs. 1200-03-26-.02(9)

Compliance Method: Compliance shall be assured by compliance with **Condition E3-12(SM1)**. The annual actual mass particulate emissions from these sources shall be reported annually in the Oak Ridge Reservation Annual Radionuclide NESHAP report required by **Condition E2(SM1)(c)1**. Historical data submitted with the Oak Ridge Reservation Annual Radionuclide NESHAP report demonstrates that **Condition E3-12(SM1)** effectively limits particulate matter emission levels to levels below the limitation in this condition.

E3-12(SM1). Radionuclides (other than Radon) sources: Emissions of radionuclides to the ambient air from Department of Energy Facilities in the Oak Ridge Reservation shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr (the 40 CFR part 61 subpart H standard).

- a) Radionuclides emission rates from existing point sources (stacks or vents) shall be measured in accordance with the requirements of 40 CFR §61.93(b) or (c), or other procedures for which EPA has granted prior approval.
- b) Radionuclide emission rates from new point sources (stacks or vents) as defined in 40 CFR part 61 subpart A shall be measured in accordance with the requirements of 40 CFR §61.93(c), or other procedures for which EPA has granted prior approval.
- c) When it is impractical to measure the effluent flow rate at a source in accordance with the requirements of 40 CFR §61.93(b)(1) or (c) or to monitor or sample an effluent stream at a source in accordance with the site selection and sample extraction requirements of 40 CFR §61.93(b)(2) or (c), the facility owner or operator may use alternative effluent flow rate measurement procedures or site selection and sample extraction procedures provided that:
 - i) It can be shown that the requirements of 40 CFR §61.93(b)(1) or (2) or (c) are impractical for the effluent stream.
 - ii) The alternative procedure will not significantly underestimate the emissions.
 - iii) The alternative procedure is fully documented.
 - iv) The owner or operator has received prior approval from EPA.
- d) Radionuclide emission measurements in conformance with the requirements of 40 CFR §61.93(b) or (c) shall be made at all release points that have a potential to discharge radionuclides into the air in quantities that could cause an effective dose equivalent in excess of 1% of the 40 CFR part 61 subpart H standard. All radionuclides that could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured. With prior EPA approval, DOE may determine these emissions through alternative procedures. For other release points that have a potential to release radionuclides into the air, periodic confirmatory measurements shall be made to verify the low emissions.
- e) To determine whether a release point is subject to the emission measurement requirements of 40 CFR §61.93(b) or (c), it is necessary to evaluate the potential for radionuclide emissions for that release point. In evaluating the potential of a release point to discharge radionuclides into the air for the purposes of this section, the estimated radionuclide release rates shall be based on the discharge of the effluent stream that would result if all pollution control equipment did not exist, but the facilities operations were otherwise normal.
- f) Environmental measurements of radionuclide air concentrations at critical receptor locations may be used as an

alternative to air dispersion calculations in demonstrating compliance with the 40 CFR part 61 subpart H standard if the owner or operator meets the following criteria:

- i) The air at the point of measurement shall be continuously sampled for collection of radionuclides.
 - ii) Those radionuclides released from the facility that are the major contributors to the effective dose equivalent must be collected and measured as part of the environmental measurement program.
 - iii) Radionuclide concentrations that would cause an effective dose equivalent of 10% of the 40 CFR part 61 subpart H standard shall be readily detectable and distinguishable from background.
 - iv) Net measured radionuclide concentrations shall be compared to the concentration levels in Table 2 appendix E of 40 CFR Part 61 to determine compliance with the 40 CFR part 61 subpart H standard. In the case of multiple radionuclides being released from a facility, compliance shall be demonstrated if the value for all radionuclides is less than the concentration level in Table 2 of appendix E of 40 CFR Part 61, and the sum of the fractions that result when each measured concentration value is divided by the value in Table 2 of appendix E of 40 CFR Part 61 for each radionuclide is less than 1.
 - v) A quality assurance program shall be conducted that meets the performance requirements described in appendix B, Method 114 of 40 CFR Part 61.
 - vi) Use of environmental measurements to demonstrate compliance with the 40 CFR part 61 subpart H standard is subject to prior approval of EPA. Applications for approval shall include a detailed description of the sampling and analytical methodology and show how the above criteria will be met.
- g) Compliance with the 40 CFR part 61 subpart H standard shall be determined by calculating the highest effective dose equivalent to any member of the public at any offsite point where there is a residence, school, business or office. The owners or operators of the Department of Energy Facilities in the Oak Ridge Reservation shall submit an annual report to EPA headquarters, the appropriate EPA regional office and the Division by June 30 which includes:
- i) the results of the monitoring as recorded in DOE's Effluent Information System and the dose calculations required by 40 CFR §61.93(a) for the previous calendar year,
 - ii) The name and location of the facility.
 - iii) A list of the radioactive materials used at the facility.
 - iv) A description of the handling and processing that the radioactive materials undergo at the facility.
 - v) A list of the stacks or vents or other points where radioactive materials are released to the atmosphere.
 - vi) A description of the effluent controls that are used on each stack, vent, or other release point and an estimate of the efficiency of each control device.
 - vii) Distances from the points of release to the nearest residence, school, business or office and the nearest farms producing vegetables, milk, and meat.
 - viii) The values used for all other user-supplied input parameters for the computer models (e.g., meteorological data) and the source of these data.
 - ix) A brief description of all construction and modifications which were completed in the calendar year for which the report is prepared, but for which the requirement to apply for approval to construct or modify was waived under 40 CFR §61.96 and associated documentation developed by DOE to support the waiver. The Division reserves the right to require that DOE send to the Division all the information that normally would be required in an application to construct or modify, following receipt of the description and supporting documentation.
 - x) Each report shall be signed and dated by a corporate officer or public official in charge of the facility and contain the following declaration immediately above the signature line: "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. See, 18 U.S.C. 1001."
- h) If the facility is not in compliance with the emission limits of 40 CFR §61.92 in the calendar year covered by the report, then the facility must commence reporting to the Administrator and Technical Secretary on a monthly basis the information listed in 40 CFR §61.94(b), for the preceding month. These reports will start the month immediately following the submittal of the annual report for the year in noncompliance and will be due 30 days following the end of each month. This increased level of reporting will continue until the Technical Secretary has determined that the monthly reports are no longer necessary. In addition to all the information required in 40 CFR §61.94(b), monthly reports shall also include the following information:
- i) All controls or other changes in operation of the facility that will be or are being installed to bring the facility into compliance.
 - ii) If the facility is under a judicial or administrative enforcement decree, the report will describe the facilities

performance under the terms of the decree.

- i) In those instances where the information requested is classified, such information will be made available to EPA and the Technical Secretary separate from the report and will be handled and controlled according to applicable security and classification regulations and requirements.
- j) All facilities must maintain records documenting the source of input parameters including the results of all measurements upon which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine effective dose equivalent. This documentation should be sufficient to allow an independent auditor to verify the accuracy of the determination made concerning the facility's compliance with the standard. These records must be kept at the site of the facility for at least five years and, upon request, be made available for inspection by the Technical Secretary, or authorized representative.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 1200-03-11-.08 and 40 CFR §61.92

Compliance Method: Compliance shall be assured by utilizing periodic measurements as described in 40 CFR 61.93(b) and by recordkeeping and reporting requirements as specified in 40 CFR 61.94 and 40 CFR 61.95 and further defined in the EPA approved document entitled DOE/ORO/2196, Rev. 1, *Compliance Plan, National Emission Standards for Hazardous Air Pollutants for Airborne Radionuclides on the Oak Ridge Reservation, Oak Ridge, Tennessee*, April 4, 2013 (see Appendix A in the permittee's Title V application for Title V Renewal Permit 571832, dated July 6, 2016) or the current EPA approved compliance plan. Results shall be reported annually in the Oak Ridge Reservation Annual Radionuclide NESHAP report by June 30 of each year as required by **Condition E2(SM1)(c)1**. If the facility is not in compliance with the emission limits of 40 CFR §61.92 in the calendar year covered by a report, compliance with the requirement to commence reporting to the Administrator and Technical Secretary on a monthly basis the information listed in 40 CFR §61.94(b), for the preceding month will be determined by submittal of the monthly reports required by 40 CFR §61.94(c),

E3-13(SM1). A construction permit application shall be submitted for any new construction or modification within an existing facility if the effective dose equivalent, caused by all radionuclide emissions from the new construction or modification is equal to or greater than 0.1 mrem/yr.

- a) In addition to any activity that is defined as construction under 40 CFR part 61, subpart A, any fabrication, erection or installation of a new building or structure within a facility that emits radionuclides is also defined as new construction for purposes of 40 CFR part 61, subpart A.
- b) An application for approval under 40 CFR §61.07 or notification of startup under 40 CFR §61.09 does not need to be filed for any new construction or modification within an existing facility if the effective dose equivalent, caused by all emissions from the new construction or modification, is less than 1% of the standard prescribed in 40 CFR §61.92. For purposes of this paragraph the effective dose equivalent shall be calculated using the source term derived using appendix D of 40 CFR Part 61 as input to the dispersion and other computer models described in 40 CFR §61.93. DOE may, with prior approval from EPA, use another procedure for estimating the source term for use in 40 CFR §61.96(b). A facility is eligible for this exemption only if, based on its last annual report, the facility is in compliance with this subpart.
- c) Conditions to approvals granted under 40 CFR §61.08 will not contain requirements for post approval reporting on operating conditions beyond those specified in 40 CFR §61.94.

Tenn. Comp. R. & Regs. 1200-03-11-.08 and 40 CFR §§61.07, 61.09, 61.96

Compliance Method: None required. This condition specifies an activity that is defined in 40 CFR part 61, subpart H, as new construction that may require an application for a construction permit, approval of construction, and notification of startup; and is not an emission limitation.

E3-14(SM1). **Beryllium sources:** Beryllium emitted from all beryllium process machine shops (01-0020-06, and 01-0020-68) shall not exceed ten (10) grams over a twenty-four (24) hour period.

Tenn. Comp. R. & Regs. 1200-03-11-.03(3)(a)

Compliance Method: Compliance demonstration for beryllium (for source 01-0020-06) is based on test data obtained from the compliance test performed in 1990/1991 for the initial startup of the machine shop source in accordance with Tenn. Comp. R. & Regs. 1200-03-11-.03(4) and 40 CFR 61, Appendix B, Method 104. Compliance with this requirement shall be assured by maintaining a minimum pressure drop of 0.5 inches of water across the final HEPA filter. The pressure drop shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted. Routine maintenance, as required to maintain specified emission limits, shall be performed on the air pollution control devices. For Source 01-0020-68, compliance demonstration for beryllium is based on test data obtained from the compliance test performed on November 17, 2010, for the initial startup of the machining source in accordance with Tenn. Comp. R. & Regs. 1200-03-11-.03(4) and 40 CFR 61, Appendix B, Method 103. Compliance with this requirement shall be assured by maintaining a minimum pressure drop of 0.2 inches of water across the final HEPA filter. The pressure drop shall be recorded once daily when the source is in operation. The days when the source does not operate shall be noted. Routine maintenance, as required to maintain specified emission limits, shall be performed on the air pollution control devices. Maintenance records shall be recorded in a suitable permanent form and kept available for inspection by the Division. These records must be kept for a period of not less than five (5) years. For lower pressure drop reading(s) resulting from replacement of filters, the permittee shall record the deviation(s) as such in their daily records. Due allowance will be made for lower pressure drop reading(s) which follow replacement of filters provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of filters.

- E3-15. Solvent 140 / Solvent 142 sources:** Volatile organic compounds (VOC) emitted from all sources using solvent 140 or solvent 142 shall not exceed 39 tons during any period of 12 consecutive months.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: VOC emissions shall be calculated from annual complex-wide solvent 140 and solvent 142 usage. Records of solvent 140 and solvent 142 monthly usage shall be maintained and reported on an annual basis in the next reporting period following the end of each calendar year. A log shall be maintained at the Y-12 Complex and be made available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

- E3-16(SM1).** For sources in this permit that are subject to the requirements of 40 CFR part 60 subpart IIII, the permittee shall comply with the applicable General Provisions of 40 CFR Part 60 Subpart A that apply to 40 CFR Part 60 Subpart IIII, as indicated in the table found in Attachment 5 of this permit.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8) and 40 CFR §60.4218

- E3-17(SM1).** For sources in this permit that are subject to the requirements of 40 CFR part 61 subpart H, the permittee shall comply with the applicable General Provisions of 40 CFR Part 61 Subpart A that apply to 40 CFR Part 61 Subpart H, as indicated in the table found in Attachment 6 of this permit.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8) and 40 CFR §§61.01, 61.96(a), 61.96(b), 61.96(c), and 61.97

General Machine Shops (Emission Source Reference Numbers 01-0020-15, 01-0020-17, & 01-0020-59)

This is a complete machine shop facility used to perform large and small machining operations; cutting; welding; forming of special components and individual items; and the assembly, testing, and packaging of the completed product. Some of these operations are conducted in enclosed shops and open work areas. This building is divided into several shop areas, such as the Main Shop, Can Shop, Saw Shop, Weld Shop, Precision Shop, Graphite Shop, Tool Fabrication Shop, Metal Fabrication Shop, and other general machine shops. Operations performed in each of these shops are very similar, except that the Tool Fabrication Shop handles smaller components, thus requiring smaller equipment/tooling. The shops utilize various lathe, drilling, and cutting machines. Some machine shops are exempt from air permitting requirements.

01-0020-15

**Building 9201-1-A
(583)**

Metal Fabrication Shop

This emission process consists of grinding, drilling, shearing, braking, part cleaning, plasma cutting, and welding.

Conditions E4-1 through E4-4 apply to source 01-0020-15

E4-1. The maximum material inputs to this source shall not exceed the following:

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

(Note: Material input means material removed by machine)

Miscellaneous Industrial Metals/Materials (Grinding) 132,673 lb/yr based on a calendar year

Compliance Method: The annual maximum material input used for permitting the grinders and sanders is based on the physical design limit for each machine and a maximum of 15 grinders and sanders operating at any one time. The permittee shall notify the Division prior to increasing the number of machines operating at any one time.

E4-2. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot of stack gases (0.50 lb/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04(1)

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from this source.

E4-3. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

E4-4. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996 and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-59 Building 9201-1-B (586)	<p style="text-align: center;">Tool Fabrication Shop</p> <p>The tool fabrication shop is primarily utilized for sharpening tools. This shop is also used for machine repair and machining small parts. This shop also houses several Electrical Discharge Machines which are used for precision cutting.</p>
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Conditions E5-1 through E5-3 apply to source 01-0020-59

E5-1. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot of stack gases (0.78 lb/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04(1)

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from this source.

E5-2. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

E5-3. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996 and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-17 Building 9201-1-C (278, 279)	<p style="text-align: center;">Graphite Carbon Shop</p> <p>In the graphite shop, graphite materials are cut into various sizes and shapes using lathes, grinders, and cutting machines. Chips and dust from this operation are collected in a bag filter and the off-gas is filtered prior to discharge to the atmosphere. Flexible vacuum (exhaust) hoses are used to collect the waste graphite particulates from the various work stations. During the machining operations, the graphite particles (dust) collected in the bag filter are recovered and packaged for re-use or removal to managed disposal sites.</p>
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Conditions E6-1 through E6-4 apply to source 01-0020-17

E6-1. The maximum material inputs to this source shall not exceed the following:

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

(Note: Material input means material removed by machine)

Miscellaneous Industrial Metals/Materials 12,515 lb/hr based on a three hour average

Graphite 6,950 lb/hr based on a three hour average

Compliance Method: The annual maximum material input used for permitting the lathes, grinders, and cutting machines is based on the physical design limit for each machine and a maximum of 25 machines operating at any one time. The permittee shall notify the Division prior to increasing the number of machines operating at any one time.

E6-2. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot of stack gases (9.91 lb/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04(1)

Compliance Method: Compliance with this emission limitation is demonstrated by compliance with **Condition E6-1**.

E6-3. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

E6-4. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996 and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-99 Building 9201-1W -W-A(272)	West General Machine Shop This emission source consists of sand/grit blasting, painting and parts cleaning. This shop also may machine different materials such as iron, aluminum, brass, etc.
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Conditions E7-1 through E7-6 apply to source 01-0020-99

E7-1. The maximum material inputs to this source shall not exceed the following:

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

(Note: Material input means material removed by machine)

Miscellaneous Industrial Metals 96,360 lb/yr based on a calendar year

Sand/Abrasive 700,800 lb/yr based on a calendar year

Compliance Method: Currently, this source is not in operation and has not operated since 1996. The permittee shall notify the Division prior to start-up.

E7-2. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot (1.53 pounds per hour).

Tenn. Comp. R. & Regs. 1200-03-07-.04(1)

Compliance Method: Currently, this source is not in operation and has not operated since 1996. The permittee shall notify the Division prior to start-up.

E7-3. For fee purposes only, volatile organic compound emissions are 1.6 tons per annual accounting period. This limit is established based on the maximum actual VOC emissions utilizing a maximum paint and thinner usage of 576 gal/yr and 72 gal/yr respectively.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(b)1

E7-4. For fee purposes, gaseous HAP emissions are 1.0 ton per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(b)1

E7-5. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

E7-6. Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period. Visible emissions shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average opacity).

Tenn. Comp. R. & Regs. 1200-03-05-.01(1) and Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996 and amended September 11, 2013 that is enclosed as Attachment #1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-19 Building 9204-2 - P(1167,1168) -C(324, 325)	<p style="text-align: center;">Rubber Shop</p> <p>The role of the rubber shop is to produce uniquely shaped and sized rubber, foam, and plastic parts, as well as provide a variety of heat and/or chemical resistant coatings. These operations are performed primarily in support of the Y-12 Complex, but a considerable amount of work is done for the other Department of Energy Oak Ridge Reservation sites, as well as other subcontractors.</p>
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Conditions E8-1 through E8-3 apply to source 01-1020-19

- E8-1.** For fee purposes, volatile organic compound emissions are 2.40 tons per annual accounting period. This limit is established based on the maximum actual VOC emissions utilizing a maximum urethane and PVC usage of 18,000 lbs/yr and 30,000 lbs/yr, respectively.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

- E8-2.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

- E8-3.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-21 Building 9212 -M(1083)	<p style="text-align: center;">Air Bearing Operation</p> <p>Air bearings are used in many of the precision machine tools located throughout the Y-12 plant. The process for building/reworking air bearings involves the attachment of porous graphite pads to metal housings. The graphite acts as a conduit for air that supports machine spindle journals (or in the case of air bearing steadyrests, parts). These graphite pads come to the shop in the general size and shape to fit the housings and journals.</p>
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Conditions E9-1 through E9-4 apply to source 01-0020-21

- E9-1.** Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot (0.40 lbs/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04(1)

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the

monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from this source.

E9-2. For fee purposes, volatile organic compound emissions are 24 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E9-3. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

E9-4. Visible emissions shall not exceed 20% opacity (aggregate count). Visible emissions from stacks shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii)

01-0020-32 Building 9401-5 -A(109)	Uranium Chip Oxidation Facility This facility is designed to thermally oxidize uranium metals and alloys.
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Conditions E10-1 through E10-3 apply to source 01-0020

E10-1. This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E10-2. Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E10-3. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-09 Building 9401-7 A,B(1160) -C,D(1161)	<p style="text-align: center;">Steam Plant</p> <p>Four Natural Gas Boilers with Low-NOx Burners and Flue Gas Recirculation. No. 2 Fuel oil used as back-up during periods of natural gas curtailment and supply interruption.</p> <p>NSPS – 40 CFR 60, Subpart Dc NESHAP - 40 CFR Part 63, Subpart DDDDD</p>
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Conditions E11-1(SM1) through E11-20 apply to source 01-0020-09

E11-1(SM1). This condition addresses applicability to 40 CFR Part 63, Subpart DDDDD. This facility is considered a major source of HAP emissions. Pursuant to 40 CFR §§63.7490(a)(1) & (d), the four boilers are considered an existing affected source in the units designed to burn gas 1 fuel subcategory as listed in 40 CFR §63.7499(l) and as defined in 40 CFR §63.7575. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition. Pursuant to 40 CFR §§63.7500(e), these existing gas 1 fuel boilers are not subject to the emission limits in Table 2 to 40 CFR Part 63, Subpart DDDDD, or the operating limits in Table 4, and therefore are not subject to Tables 5, 6, 7, 8, 11, 12 and 13 to 40 CFR Part 63, Subpart DDDDD. The applicable requirements of 40 CFR Part 63, Subpart DDDDD are incorporated into this permit pursuant to Tenn. Comp. R. & Regs. 1200-03-09-.03(8).

Compliance Method: In order to comply with 40 CFR Part 63, Subpart DDDDD, the four boilers must comply with **Conditions E11-1(SM1) through E11-11(SM1)** of this permit. Pursuant to 40 CFR §63.7495(b), the permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016.

E11-2(SM1). Pursuant to 40 CFR §63.7500(a)(1)-Table 3, the permittee must comply with the following work practice standards:

- (1) Pursuant to 40 CFR §63.7515(d), conduct an annual tune-up of the boilers no more than 13 months after the previous tune-up following the requirements specified in 40 CFR §63.7540(a)(10)(i) through (vi) as follows:
 - (i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;
 - (ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
 - (iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown).;

- (iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject;
- (v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
- (vi) Maintain on-site and submit, if requested by the Division, an annual report containing the information in paragraphs (A) through (C) below,
 - (A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
 - (B) A description of any corrective actions taken as a part of the tune-up; and
 - (C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

Pursuant to 40 CFR §63.7540(a), if a boiler is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-3.** Pursuant to 40 CFR §63.7500(a)(3), the permittee at all times, must operate and maintain any affected source (as defined in 40 CFR §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Division that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-4.** Pursuant to 40 CFR §63.7500(b), and as provided in 40 CFR §63.6(g), the permittee must get the approval of the EPA if the permittee chooses the use of an alternative to the work practice standards in **Condition E11-2(SM1)**.

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-5.** Pursuant to 40 CFR §63.7505(a), the permittee must be in compliance with the work practice standards at all times the affected unit is operating except during periods of startup and shutdown.

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-6.** Pursuant to 40 CFR §63.7540(b), the permittee must report each instance in which a deviation from **Condition E11-2(SM1)** occurred. These deviations must be reported according to the requirements in §63.7550.

Compliance Method:Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-7.** Pursuant to 40 CFR §63.7545(a), the permittee must submit to the Division all of the notifications in 40 CFR §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply by the dates specified.

Compliance Method:Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-8.** Pursuant to 40 CFR §63.7545(f), the permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in 40 CFR §63.7575. The notification must include the information specified in paragraphs (1) through (5) below.

- (1) Company name and address.
- (2) Identification of the affected unit.
- (3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.
- (4) Type of alternative fuel that you intend to use.
- (5) Dates when the alternative fuel use is expected to begin and end.

Compliance Method:Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- E11-9.** Pursuant to 40 CFR §63.7550(a), the permittee must submit an annual Compliance Report that contains the following information required in 40 CFR §63.7550(c)(1)-Table 9:

- (1) Company and Facility name and address.
- (2) Process unit information, emissions limitations, and operating parameter limitations.
- (3) Date of report and beginning and ending dates of the reporting period.
- (4) The total operating time during the reporting period.
- (5) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, tune-up according to 40 CFR §63.7540(a)(10). Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown.
- (6) If there are no deviations from the requirements for work practice standards in **Condition E11-2(SM1)**, the permittee must submit a statement that there were no deviations from the work practice standards during the reporting period.
- (7) If there is a deviation from a work practice standard during the reporting period, the report must provide:
 - (i) A description of the deviation,
 - (ii) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

- (i) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

Compliance Method: Pursuant to 40 CFR §63.7550(b)(1) through (4), the first Compliance Report submitted after issuance of Title V Permit Number 571832 must cover the period beginning on January 1, 2017 for each boiler and ending on December 31, 2017 and must be postmarked or submitted electronically to the Technical Secretary at the address in **Condition E2(SM1)(b)** no later than January 31, 2018. Each subsequent annual Compliance Report must cover the reporting period from January 1 through December 31 and must be postmarked or submitted electronically to the Technical Secretary at the address in **Condition E2(SM1)(b)** no later than January 31 of the following year. Pursuant to 40 CFR §63.7550(h)(3), the permittee must also submit the Compliance Report electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the EPA at the appropriate address listed in 40 CFR §63.13.

E11-10. Pursuant to 40 CFR §63.7555(a)(1), the permittee must maintain a record of each Notification of Compliance Status and annual Compliance Report that is submitted to comply with this subpart, including all documentation supporting any Notification of Compliance Status and annual Compliance Report that is submitted to the Technical Secretary.

Compliance Method: Pursuant to 40 CFR §63.7560(a),(b) and (c), these records and supporting documentation must be kept in a form suitable and readily available for expeditious review, according to 40 CFR §63.10(b)(1). Each record must be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Each record must be kept on-site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1). The permittee may keep the records off-site for the remaining 3 years.

E11-11(SM1). Pursuant to 40 CFR §63.7565, (Attachment #7) to this permit shows which parts of the General Provisions in 40 CFR §§63.1 through 63.15 are applicable.

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

E11-12. This fuel burning installation consists of four (4) boilers. The maximum heat input capacity of each boiler at this fuel burning installation shall not exceed 99 MMBtu/hr.

Tenn. Comp. R. & Regs. 1200-03-10-.02(2)(a)

E11-13(SM1). Only natural gas or No. 2 fuel oil shall be used as fuel(s) for this fuel burning installation. No. 2 fuel oil may be burned for periodic testing of liquid fuel, maintenance, or operator training, for a period not to exceed a total of 48 hours per boiler during any calendar year. No. 2 fuel oil may also be burned during periods of gas curtailment or supply interruptions of any duration. Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8) and 40 CFR §63.7575

Compliance Method: Compliance with this limitation may be demonstrated by the records required by **Condition E11-19**.

E11-14(SM1). Particulate matter (TSP) emitted from this fuel burning installation shall not exceed 9.3 pounds per hour and 41 tons per year.

Tenn. Comp. R. & Regs. 1200-03-06-.01(7)

Compliance Method: Compliance with this emission limitation shall be assured by compliance with **Condition E11-13(SM1)** and the log required by **Condition E11-19**. Should proof of compliance with this condition be required, the AP-42 Emission Factors for natural gas and/or number 2 fuel oil combustion listed in Tables 1.3-1, 1.3-2, and 1.3-3 dated September 1998, and/or Tables 1.4-1 and 1.4-2 dated July 1998, (enclosed in Attachment #2) shall be used.

This emission limitation is established pursuant to Rule 1200-03-06-.01(7) of the Tennessee Comprehensive Rules & Regulations and the agreement letter dated August 14, 2007, from the permittee. The permittee has requested this limit in order to establish allowable emissions consistent with expected actual emissions.

E11-15(SM1). Sulfur dioxide (SO₂) emitted from this fuel burning installation shall not exceed 200.8 pounds per hour and 39 tons per year.

Tenn. Comp. R. & Regs. 1200-03-14-.01(3)

Compliance Method: Compliance with this emission limitation shall be assured by compliance with **Condition E11-13(SM1)** and the log required by **Condition E11-19**. Should proof of compliance with this condition be required, the AP-42 Emission Factors for natural gas and/or number 2 fuel oil combustion listed in Tables 1.3-1, 1.3-2, and 1.3-3 dated May 2010, and/or Tables 1.4-1 and 1.4-2 dated July 1998, (enclosed in Attachment #2) shall be used.

This emission limitation is established pursuant to Rule 1200-03-14-.01(3) of the Tennessee Air Pollution Control Regulations and the agreement letter dated August 14, 2007, from the permittee. The permittee has requested this limit in order to establish allowable emissions consistent with expected actual emissions.

E11-16(SM1). Nitrogen oxides (NO_x) emitted from this fuel burning installation shall not exceed 81.0 tons per year.

Tenn. Comp. R. & Regs. 1200-03-09-.01(5)(b)2(ii)

Compliance Method: Compliance with this emission limitation shall be assured by compliance with **Condition E11-13(SM1)** and the log required by **Condition E11-19**, and the use of low-NO_x burners and flue gas recirculation. Should proof of compliance with this condition be required, the AP-42 Emission Factors for natural gas and/or number 2 fuel oil combustion listed in Tables 1.3-1, 1.3-2, and 1.3-3 dated May 2010, and/or Tables 1.4-1 and 1.4-2 dated July 1998, (enclosed in Attachment #2) shall be used.

E11-17(SM1). Volatile organic compounds (VOC) emitted from this fuel burning installation shall not exceed 9.4 tons per year.

Tenn. Comp. R. & Regs. 1200-03-09-.01(5)(b)2(ii)

Compliance Method: Compliance with this emission limitation shall be assured by compliance with **Condition E11-13(SM1)** and the log required by **Condition E11-19**. Should proof of compliance with this condition be required, the AP-42 Emission Factors for natural gas and/or number 2 fuel oil combustion listed in Tables 1.3-1, 1.3-2, and 1.3-3 dated May 2010, and/or Tables 1.4-1 and 1.4-2 dated July 1998, (enclosed in Attachment #2) shall be used.

E11-18. The sulfur content of the fuel oil shall not exceed 0.5 percent by weight.

Compliance Method: Compliance with this requirement shall be demonstrated through fuel supplier certification for each shipment of fuel oil which contains the name of the oil supplier, a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR §60.41c, and the sulfur content of the oil. Fuel oil certifications shall be retained for a period of not less than five (5) years.

40 CFR §§60.42c(d) and 60.48c(f)

E11-19. A monthly log showing the amount and type of fuel combusted in this fuel burning installation, which readily shows compliance with **Condition E11-13(SM1)**, shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. All data, including all required calculations, must be entered into the log no later than thirty (30) days following the end of the month for which the data is required. This log shall be retained for a period of not less than five (5) years.

40 CFR §60.48c(g)

E11-20. Visible emissions from this fuel burning installation shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period. Visible emissions shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average opacity).

Tenn. Comp. R. & Regs. 1200-03-05-.01(1) and Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-38 Building 9767-4 -B(00)	Brine/Methanol System Buildings 9767-4 and 9767-13 and are known as the chiller system. The brine/methanol system is a make-up system of 25.5 to 28 percent methanol and 72 to 74.5 percent water. The system is replenished with brine/methanol each year.
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Conditions E12-1 and E12-2 apply to source 01-0020-38

E12-1. For fee purposes, volatile organic compound emissions from sources 01-0020-38 (Building 9767-4) and 01-0020-35 (Building 9767-13) are based on an estimated maximum annual usage of methanol of 39 tons per annual accounting period. It is assumed that all methanol added to these systems is lost to the atmosphere through equipment leaks.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E12-2. Visible emissions from this source shall not exceed 20 percent opacity as determined by EPA Method 9 in the current 40 CFR 60, Appendix A. (6 minute average)

Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment #1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-35 Building 9767-13 -A(00)	Brine/Methanol System Buildings 9767-4 and 9767-13 and are known as the chiller system. The brine/methanol system is a make-up system of 25.5 to 28 percent methanol and 72 to 74.5 percent water. The system is replenished with brine/methanol each year.
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Conditions E13-1 and E13-2 apply to source 01-0020-35

E13-1. For fee purposes, volatile organic compound emissions from sources 01-0020-38 (Building 9767-4) and 01-0020-35 (Building 9767-13) are based on an estimated maximum annual usage of methanol of 39 tons per annual accounting period. It is assumed that all methanol added to these systems is lost to the atmosphere through equipment leaks.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E13-2. Visible emissions from this source shall not exceed 20 percent opacity as determined by EPA Method 9 in the current 40 CFR 60, Appendix A. (6 minute average)

Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment #1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-50 Y-12 Emergency Generators	Building Complex Emergency Generators Diesel-Fired Emergency Reciprocating Internal Combustion Engines located throughout the Y-12 Complex. The emergency generators are used to provide power for critical systems in the event of electrical power failures/outages at the Y-12 Complex. These compression ignition engines are subject to NSPS, Subpart IIII and RICE MACT, Subpart ZZZZ.
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Conditions E14-1 through E14-21 apply to source 01-0020-50, unless otherwise noted.

E14-1. The total heat input capacity of this group of sources (all engines together) is 37.558 Million British Thermal Units per hour (37,558,000 Btu/hr).

Tenn. Comp. R. & Regs. 1200-03-.09-.03(8)

Compliance Method: None. This condition is a statement of design input capacity for this source. If the permittee needs to increase the design or maximum capacity of this source, the permittee shall pursue the appropriate Title V procedure in accordance with Tenn. Comp. R. & Regs. Rule 1200-03-09-.02(11). If a construction permit is applied for, this shall be done in accordance with Tenn. Comp. R. & Regs. Rule 1200-03-09-.01(1).

E14-2. Sulfur dioxide (SO₂) emitted from this source shall not exceed 4.0 pounds per million Btu per hour of heat input.

Tenn. Comp. R. & Regs. 1200-03-14-.02(2), 40 CFR §60.4207(b)

Compliance Method: Compliance with the emission limit shall be assured by firing only diesel fuel and based on compliance with **Conditions E14-1 and E14-6** of this permit, and the emission factors in AP-42, Chapter 3.3, Gasoline and Diesel Industrial Engines, and Chapter 3.4, Large Stationary Diesel and All Stationary Dual-fuel Engines.

Conditions E14-3 through E14-10 apply only to the emergency engines listed in Condition E14-3, unless otherwise noted.

- E14-3.** The following engines driving emergency generators are subject to regulations under 40 CFR Part 60, Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines.

Parameter	Engine Data		
	Generator 74-7399*	Generator 74-7500	Fire Pump**
Manufacturer	Cummins	Cummins	Clarke
Model Number	6BTA5.9G3	QSB7-G3 NR3	JU4H-UF30
Model Year	2006	2010	2006
Input (bhp)	207	227	64
EPA Tier Certified	1	3	1

Emissions from the subject units shall meet the following emissions standards, in grams per kilowatt-hour (grams per horsepower-hour):

Pollutant	Emission Limits, g/kW-hr (g/hp-hr)		
	Generator 74-7399*	Generator 74-7500	Fire Pump**
NMHC + NO _x		4.0 (3.0)	10.5 (7.8)
CO	11.4 (8.5)	5.0 (3.7)	5.0 (3.7)
PM	0.54 (0.40)	0.30 (0.22)	0.80 (0.60)
HC	1.3 (1.0)		
NO _x	9.2 (6.9)		

40 CFR §60.4205 (b), and (c) (40 CFR §89.112 – Table 1)

* This is a pre-model 2007 engine manufactured after April 1, 2006, therefore, emission limits are from 40 CFR 60 Subpart IIII, Table 1.

**Emission limits are taken from 40 CFR 60 Subpart IIII, Table 4.

Compliance Method: The permittee shall comply with the PM, CO, (NMHC + NO_x), NO_x, and HC emission limitations by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b) for the same model year and maximum engine power and the manufacturer's certification of compliance with 40 CFR §89.112 and by complying with **Condition E14-1**. The permittee shall maintain a record of this certification at the source location, which can include the EPA engine label. The engine shall be installed and configured according to the manufacturer's specifications.

40 CFR §60.4211(c)

- E14-4.** For emergency stationary compression ignition (CI) internal combustion engines (ICE) that does not meet the standards applicable to non-emergency engines, the engine (s) must have a non-resettable hour meter installed prior to startup.

40 CFR §60.4209(a), Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(a)

- E14-5.** Pursuant to 40 CFR §60.4211(f), the permittee must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.

- (2) The permittee may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (2)(i) through (iii) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (2).
- (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- (3) There is no time limit on the use of emergency stationary ICE in emergency situations. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (2) of this condition. Except as provided in paragraph (3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
- (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
 - (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
 - (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

40 CFR §60.4211(f)

Compliance Method: Compliance shall be determined through monthly records of the operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for the following categories as specified in **Condition E14-5**: (1) emergency operation, (2) maintenance checks and readiness testing, demand response, and (3) non-emergency operation. The permittee shall calculate the total annual operating hours on a calendar year

basis. The permittee shall maintain the following log format or an alternative format which readily provides the same required information.

Monthly Log for each emergency stationary ICE

	Operating Hours per Month			
Month	Maintenance checks and readiness testing	Other non-emergency operation	Emergency operation	Comments
January				
February				
March				
Etc.				
December				
TOTALS				

E14-6. Pursuant to 40 CFR §60.4207(b), the permittee must use diesel fuel that meets the requirements of 40 CFR §80.510 (b) for non-road diesel fuel, as follows:

- (1) Sulfur content shall not exceed 15 parts per million (ppm) maximum for nonroad diesel fuel.
- (2) Cetane index or aromatic content, as follows:
 - (i) A minimum cetane index of 40; or
 - (ii) A maximum aromatic content of 35 volume percent.

40 CFR §60.4207(b)

Compliance Method: Compliance with this requirement shall be demonstrated through fuel supplier/vendor's certification of the fuel specifications. The supplier/ vendor may supply a statement certifying that all diesel fuel meets the fuel specifications. The logs must be maintained onsite and made readily available for inspection by the Technical Secretary or his representative for a period of not less than five (5) years.

E14-7. The engine must be operated and maintained per manufacturer's specifications. The permittee may change only those emissions related settings that are permitted by the manufacturer.

40 CFR §60.4211(a)

E14-8. The fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in Table 4 to Subpart IIII of 40 CFR Part 60, Subpart IIII.

Compliance Method: The permittee must operate and maintain the engine in accordance with manufacturer's standards and/or written instruction to achieve these emission standards over the entire life of the engines.

40 CFR §60.4205(c) and §60.4206

E14-9. The permittee shall comply by purchasing an engine certified to the emission standards in **Condition E14-3**. The engine must be installed and configured according to the manufacturer's emission-related specifications.

40 CFR §60.4211(c)

E14-10. The emergency engine may be removed and replaced with repaired or refurbished equivalent capacity emergency engines in order to maintain facility operation.

Tenn. Comp. R. & Regs. 1200-03-09

Compliance Method: Records shall be maintained on site of such changes and shall be entered into a log no later than a week after the unit is replaced. If the replacement engine is retained on a permanent basis, the Permittee shall notify the Division in writing and submit an application to the Division if the unit is subject to any applicable federal requirements including MACT, NSPS, etc.

Conditions E14-11 through E14-18 apply only to the emergency engines listed in Condition E14-11, unless otherwise noted.

E14-11. The following engines driving emergency generators are subject to regulations under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Engine Manufacturer	Engine Model Number	Engine Model Year	Engine Input (br-hp)	EPA Tier Certified	Generator
Caterpillar	3412	2005	1250	1	2130C
Perkins	GCD325	2005	325	1	2130D
Perkins	D125P1 / 2332	2002	212	N/A	74-7387
Onan/Cummins	4A2.3-G1/50122F	1992	34	N/A	74-7353
Onan / Cummins	4A2.3-G1/50122F	1991	34	N/A	74-7361
Onan / Cummins	4BT3.9-G2	1993	99	N/A	74-7359
Onan/Cummins	SER 30444	1987	99	N/A	74-7497
Onan / Cummins	6A3.4-G1/50189F	1991	40.7	N/A	74-7360
Onan / Cummins	6B1-5.9	1989	170	N/A	74-7364
Onan / Cummins	6BT5.9-G1	1995	135	N/A	74-7365
Onan/Cummins	25DKAF	1996	40.7	N/A	74-7369
Onan / Cummins	6CTA8.3	1989	277	N/A	74-7350
Onan/Cummins	DNAC5622892 / Onan LPW2	2001	17	N/A	74-7380
Onan/Cummins	DNAC5622892 / Onan LPW2	2002	17	N/A	74-7386
Onan / Cummins	4BT3.9-G4	2002	68	N/A	74-7385
Onan / Cummins	6A3.4-G1/50189F	1991	50	N/A	74-7356
John Deere	4039TF004	1999	120	N/A	74-7370
John Deere	4039DF004	1999	49	N/A	74-7371
John Deere	4039DF004	1987	49	N/A	74-7372
John Deere	4039DF004	1999	49	N/A	74-7376
John Deere	4039DF004	1999	49	N/A	74-7377
John Deere	4039DF004	1999	125	N/A	74-7373
John Deere	4039DF004	1999	64	N/A	74-7375
John Deere	4039TF004	1999	97	N/A	74-7378
John Deere	CD4039D368146	1999	64	N/A	74-7379
Cummins	6BTA5.9G3	2005	207	1	74-7391
Cummins	6BTA5.9G3	2005	207	1	74-7392
Cummins	6BTA5.9G3	2005	207	1	74-7393
Cummins	6BTA5.9G3	2006	207	1	74-7399
Cummins	QSB7-G3 NR3	2010	227	3	74-7500
Cummins	QSL9-G2	2005	364	2	74-7396
Onan/Cummins	DNAD / LPW3	2005	20.5	N/A	74-7397
Cummins	QSL9-G2	2005	364	2	74-7394
Cummins	QSL9-G2	2005	364	2	74-7395
Cummins	QSL9-G2	2005	364	2	74-7398

Engine Manufacturer	Engine Model Number	Engine Model Year	Engine Input (br-hp)	EPA Tier Certified	Generator
Clarke	JU4H-UF30	2006	64	1	Fire Pump

E14-12. The emergency engine may be removed and replaced with repaired or refurbished equivalent capacity emergency engines in order to maintain facility operation. For the emergency engine model numbers listed above, except for Engine Model 3412, (emergency NSPS engines less than 500 brake horsepower), the permittee shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for these emergency engines under 40 CFR Part 63, Subpart ZZZZ.

40 CFR §63.6590(c)

Compliance Method: Compliance with this requirement for all the engines, except for Engine Model 3412, shall be assured by complying with the NSPS requirements listed in the conditions given above.

E14-13. For the emergency engine model numbers listed above, except for Engine Model 3412, (emergency NSPS engines less than 500 brake horsepower), the permittee shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for these emergency engines under 40 CFR Part 63, Subpart ZZZZ. For the emergency engine Model Number 3412 (emergency engine greater than 500 brake horsepower), any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs 1-3 below, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs 1-3 below, the engine will not be considered an emergency engine under 40 CFR Part 63, Subpart ZZZZ and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of the emergency stationary reciprocating internal combustion engine (RICE) in emergency situations.
- (2) The permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
- (3) The permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for the facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that the permittee may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this condition, as long as the power provided by the financial arrangement is limited to emergency power.

40 CFR §63.6640(f)

E14-14. For all the existing emergency engines (non-NSPS emergency engines less than or equal to 500 brake horsepower) listed under 40 CFR Part 63, Subpart ZZZZ, list above except for Models 6BTA5.9G3 (2006 model year), QSB7-G3-NR3, and JU4H-UF30, the permittee shall be in compliance with the requirements (a) through (f) beginning no later than May 3, 2013.

- (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; however, the permittee has the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.
- (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements as described in (a), (b), and (c) above, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. The permittee must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

40 CFR §63.6603(a)

- (d) The permittee must install a non-resettable hour meter to each existing engine if one is not already installed.

40 CFR §63.6625(f)

- (e) Any operation of an engine other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (i), (ii), and (iii) below, is prohibited. If the permittee does not operate an engine according to the requirements in (i), (ii), and (iii) below, the engine will not be considered an emergency engine, and will need to meet all requirements for non-emergency engines.
 - (i) There is no time limit on the use of emergency stationary RICEs in emergency situations.
 - (ii) The permittee may operate an emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The permittee may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
 - (iii) The permittee may operate an emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that the permittee may operate an emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. An engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by **this condition**, as long as the power provided by the financial arrangement is limited to emergency power.

40 CFR §63.6640(f)(1)

- (f) The permittee must keep records of the hours of operation of each engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the

operation as emergency and how many hours are spent for non-emergency operation. If an engine is used for demand response operation, the permittee must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. These logs must be maintained at the facility and kept available for inspection by the Technical Secretary or his representative. These logs must be retained for a period of not less than five (5) years.

40 CFR §63.6655(f)

E14-15. Beginning no later than May 3, 2013, the permittee must operate the emergency **Engine Model 3412** (non-NSPS emergency engines greater than 500 brake horsepower) as described in (a) through (c) below. If the engine is not operated according to the requirements in (a) through (c) below, the engine will not be considered an emergency engine under 40 CFR Part 63 Subpart ZZZZ, and must meet all requirements for non-emergency engines.

- (a) There is no time limit on the use of emergency stationary RICE in emergency situations.
- (b) The permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.
- (c) The permittee may operate the emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

40 CFR §63.6640(f)(2)

E14-16. The permittee must be in compliance with the emission limitations and operating limitations in 40 CFR Part 63, Subpart ZZZZ that apply to the permittee at all times. At all times the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Technical Secretary which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.6605

E14-17. If the permittee is required to submit an Initial Notification but is otherwise not affected by the requirements of this subpart, in accordance with 40 CFR §63.6590(b), your notification should include the information in 40 CFR §63.9(b)(2)(i) through (v), and a statement that the permittee's stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

40 CFR §63.6645(d)

E14-18. The emergency engines driving fire pumps are subject to regulations under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The permittee shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for this emergency engine under 40 CFR Part 63, Subpart ZZZZ.

40 CFR §63.6590(c)(7)

Conditions E14-19 through E14-21 apply to source 01-0020-50, unless otherwise noted.

E14-19. [Reserved - Condition E14-19 no longer applies as part of Administrative Amendment #1 to this permit.]

E14-20. Visible emissions from this source shall not exceed greater than twenty percent (20%) opacity except for one (1) six-minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period. Visible emissions shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average opacity).

Tenn. Comp. R. & Regs. 1200-03-05-.01(1) and Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

E14-21. For fee purposes, the permittee shall calculate its annual actual oxides of nitrogen (NO_x) emissions, particulate matter (PM) emissions, sulfur dioxide (SO₂) emissions, volatile organic compound (VOC) emissions, and hazardous air pollutants (HAPs) from these fuel-burning sources using appropriate emission factors supplied by the equipment vendor or those found in EPA AP-42, or a combination of both, in conjunction with hours of operation of each engine. The results of these calculations shall be recorded and maintained in tabular form (see example below) and shall be retained for a period of not less than five (5) years.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(b)1

Calendar Year log of total emissions from emergency diesel engines (01-0020-50)			
Engine _____		January 1, _____ to December 31,	
Emissions from emergency diesel engines and fire pump engine			
Pollutant	Operating time (hr)	Emission Factor (g/hp-hr or lb/hp-hr)	Emissions (tons)
NOx			
SO ₂			
PM			
VOC (NMHC)			
HAPs			

Production Machining

(Emission Source Reference Numbers 01-1020-18, 01-1020-21)

The primary mission of the North Production Machining Operations is to process DU metal and alloy and non-uranium metals such as steel, aluminum alloys, cast iron, magnesium alloys, and bronze. The principal processes are metal-working operations in which a cast, forged, or formed shape is machined. The processes performed in the operations are standard industrial operations such as milling, sawing, wire-feed electrical discharge, single-point turning, lapping, grinding, boring, etc. The operations contain computer-controlled and manually operated machine tools of various sizes and descriptions. The machining operations can perform blank machining, semi-machining, finish machining, auxiliary feature generation, material properties sample collection, and specimen preparation.

The primary mission of the West Production Machining operations is also used to process DU metal and alloy and non-uranium metals on a smaller scale than the North Production Machining operations. However, limited machining operations in the West Production Machining Operations support the North Production Machining operations.

01-1020-18 Building 9201-5N N-A(67)	North Production Machining Operation
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Conditions E15-1 through E15-5 apply to source 01-1020-18

E15-1. The maximum material inputs to this source shall not exceed the following:

(Note: Material input means material removed by machine)

Miscellaneous Metals (NonHaps)	25,029 lbs/hr
Miscellaneous Metals (HAPS)	8,466 lbs/hr
Uranium Metals/Alloys	2,226 lbs/hr

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

Compliance Method: The annual process material input rate is based on the physical design limit for each machine with a maximum of 50 machines operating at any one time. The permittee shall notify the Division prior to increasing the number of machines operating at any one time.

E15-2. Particulate matter emitted from this source shall not exceed 22.30 pounds per hour.

Tenn. Comp. R. & Regs. 1200-03-07-.02(1)

Compliance Method: Compliance with this emission limitation is demonstrated by compliance with **Condition E15-1**.

E15-3. Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196*, Rev. 1 *Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E15-4. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

E15-5. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-3-9-.02(11)(e)1(iii)

01-0020-21 Building 9201-5W W-I(00)	West Production Machining Operation This source processes miscellaneous metals including uranium metals and alloys and other industrial metals such as aluminum, iron, stainless steel, etc. The machining equipment in the shop is not connected to a stack exhaust or vent.
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Conditions E16-1 through E16-2 apply to source 01-0020-21

E16-1. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

E16-2. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source will be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-06 Building 9202 -A(160)	Development Activities (Emission Source Reference Number 01-0020-06) The Y-12 Development Organization operates literally hundreds of processes in a research and development (R&D) environment. The organization facilities are utilized to perform R&D activities in support of the overall DOE missions. These activities encompass diverse technical disciplines and many different laboratories and pilot plant scale operations and experimental techniques. These include studies of metals and ceramics, synthesis of organic compounds, microanalysis, use of robotics, measurement techniques studies, computer software development, development of electronic devices, precision machining, methods for waste treatment and process material recovery, as well as the development of fabrication processes. Work is typically performed in laboratory hoods or inert atmosphere glove boxes. Most development activities are exempt from air permitting requirements per Tenn. Comp. R. & Regs. 1200-3-9-.04(5). The only permitted emission source in Development is the beryllium laboratory where beryllium and beryllium compounds are processed. The laboratory is designed for R&D activities supporting the processing of ceramic materials with toxic properties. The scope of the processing includes material and process development, fabrication of prototype and test components.
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Conditions E17-1 through E17-2 apply to source 01-0020-06

E17-1. This source is a part of the grouped Beryllium sources which are required to meet the ten (10) grams per twenty-four (24) hour period beryllium emission limit as stated in **Condition E3-14(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-14(SM1)**.

E17-2. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-100 Buildings 9226/9226- 01/9424-04/9404-27 (146, 147, 830, GEN- 22151, GEN-22161, FPD 101, FPD 301)	Uranium Processing Facility (Emission Source Reference Number 01-0020-100) Uranium Processing Facility Operations: Main Process Building (MPB) Fan Exhaust Y-9226-A, Salvage and Accountability Building (SAB) Fan Exhaust Y-9226-01-B, Process Support Facility (PSF) Fan Exhaust Y-9424-04-C, Standby Diesel Generator 22151 Y-9999-15-A, Standby Diesel Generator 22161 Y-9999-15-B, Fire Water Pump 101 Y-9404-27-A, and Fire Water Pump 301 Y9404-27-B
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Conditions E18-1(SM1) through E18-23(SM1) apply to source 01-0020-100

E18-1(SM1). This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-07-.04(1) 1200-03-09-.03(8) and 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E18-2. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

E18-3(SM1). Radionuclides emitted from this source are limited by **Condition E3-12(SM1)**, which limits radionuclide emissions from sources inside the Oak Ridge Reservation.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8) and 1200-03-11-.08, 40 CFR §61.92

Compliance Method: As specified in **Condition E3-12(SM1)**.

E18-4(SM1). Nitrogen oxides emitted by this source shall not exceed 218.5 tons during any period of 12 consecutive months.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2) and the applications with dates, March 22, 2018 and May 24, 2018

Compliance Method: Compliance with this limitation is assured based on the source's potential to emit information presented in the application with date March 22, 2018.

E18-5(SM1). Volatile organic compounds emitted by this source shall not exceed 1.8 tons during any period of 12 consecutive months.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2) and the applications with dates March 22, 2018 and May 24, 2018

Compliance Method: The potential VOC emissions from this source are less than 5 tons per year. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii) and 1200-03-10-.04(2)(b)(1), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3(i).

E18-6(SM1). The maximum heat input capacity of this fuel burning installation (emergency generator and fire pump IC engines) shall not exceed 69 Million British Thermal Units per hour (MM Btu/hr). The Technical Secretary may require the permittee to prove compliance with this rate.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

Compliance Method: Compliance is demonstrated by purchasing and installing engines that do not exceed the stated limitation, and by maintaining purchase records and operating manuals for the engines. Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, review of purchase records and operating manuals for the engines, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

E18-7(SM1). Pursuant to 40 CFR §60.4207(b), the permittee shall use diesel fuel that meets the requirements of 40 CFR §80.510 (b) for non-road diesel fuel, as follows:

- (a) Sulfur content shall not exceed 15 parts per million (ppm) maximum for nonroad diesel fuel.
- (b) Cetane index or aromatic content, as follows:
 - 1. A minimum cetane index of 40; or
 - 2. A maximum aromatic content of 35 volume percent.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4207(b) and 40 CFR §80.510(b)

Compliance Method: Compliance shall be demonstrated by keeping invoices of fuel purchases showing that the fuel meets these requirements.

E18-8(SM1). Sulfur dioxide (SO₂) emitted from emergency generator engines and emergency fire pump engines at this source shall not exceed the following limitations:

Source Description	Limitation	Units	Averaging Interval	Tenn. Comp. R. & Regs.
emergency generators	4.0	pounds SO ₂	million BTU	1200-03-14-.02(2)(a) 40 CFR §60.4207(b)
emergency fire pump engines	0.24	tons	year	1200-03-14-.02(2)(a) 40 CFR §60.4207(b)

Tenn. Comp. R. & Regs. 1200-03-14-.02, 40 CFR §60.4207(b)

Compliance Method:

Source Description	Compliance Method
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emergency generators	The potential SO ₂ emissions from this source are less than 5 tons per year. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii) and 1200-03-10-.04(2)(b)(1), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3(i).
emergency fire pump engines	The potential SO ₂ emissions from this source are less than 5 tons per year. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii) and 1200-03-10-.04(2)(b)(1), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3(i).

E18-9(SM1). The following engines driving emergency generators and fire pumps are subject to regulations under 40 CFR Part 60, Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, and 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Engine Manufacturer	Engine Model Number	Engine Model Year	Rated Heat Input (MMBtu/hr)	Engine Output (kW/bhp)	EPA Tier Certified	Generator
TBD (generator)	TBD	TBD	32.43	3,654/4,900	TBD	Gen A
TBD (generator)	TBD	TBD	32.43	3,654/4,900	TBD	Gen B
TBD (fire pump)	TBD	TBD	1.61	172/230	TBD	Gen C
TBD (fire pump)	TBD	TBD	1.61	172/230	TBD	Gen D

Emissions from generator and fire pump engines shall meet the following emissions standards, in grams per kilowatt-hour (g/kW-hr):

Rated Power (kW)	Model Year	NMHC + NO _x	PM	CO
3,654 (Generators)	2006+	6.4	0.20	3.5
172 (Fire pumps)	2009+	4.0	0.20	-

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4205(b) and (c)

Compliance Method: Compliance shall be demonstrated by purchasing an engine certified to the emission standards in 40 CFR §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, or.

If the engine and control device are not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or if the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:

- 1) If the engine has a maximum engine power less than 100 HP, the permittee must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if the permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or if the permittee changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee must conduct an initial performance test as specified in 40 CFR §60.4212 to demonstrate compliance with the applicable emission standards within 1 year of such action.
- 2) If the engine has a maximum engine power greater than or equal to 100 HP and less than or equal to 500 HP, the permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition,

the permittee must conduct an initial performance test as specified in 40 CFR §60.4212 to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer.

3) If the engine has a maximum engine power greater than 500 HP, the permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test as specified in 40 CFR §60.4212 to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. The permittee must conduct subsequent performance testing as specified in 40 CFR §60.4212 every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §§60.4211(a), 60.4211(c), 60.4211(g), and 60.4212

E18-10(SM1). The permittee must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (2)(i) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (2).
 - (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
- (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (2) of this condition. Except as provided in paragraph (3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
 - (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
 - (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
 - (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4211(f)

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source..

E18-11(SM1). The engine must be operated and maintained per manufacturer's specifications. The permittee may change only those emissions related settings that are permitted by the manufacturer.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4211(a)

Compliance Method: Determination of compliance with this condition will be assessed based on information available to the Technical Secretary that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

E18-12(SM1). The emergency generator and fire pump IC engines may be removed and replaced with repaired or refurbished equivalent capacity emergency engines that have been properly certified as meeting the standards that would be applicable to such engines under the appropriate nonroad engine provisions, in order to maintain facility operation.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4200(e)

Compliance Method: Records shall be maintained on site of such changes and shall be entered into a log no later than a week after the unit is replaced. If the replacement engine is retained on a permanent basis (1-year or more) the Permittee shall notify the Division in writing and submit an application to the Division if the unit is subject to any applicable federal requirements including MACT, NSPS etc. The 1-year limit applies to all engines used as replacement engines, e.g., if a replacement engine used for 11 months is itself replaced by a subsequent replacement engine for the remainder of the 1-year period (or longer) the replacement engine used for 11 months may be considered a stationary engine subject to the applicable NSPS (or other) rule (assuming that it is brought back into operation). The subsequent replacement engine could also be considered a stationary engine subject to the applicable NSPS (or other) rule.

E18-13(SM1). Pursuant to 40 CFR §63.6640(f), the permittee must operate the emergency engines according to the requirements in paragraphs (f)(1)(i) through (iii) of this condition. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii), is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) below, the engine will not be considered an emergency engine under 40 CFR Part 63, Subpart ZZZZ and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of the emergency stationary reciprocating internal combustion engine (RICE) in emergency situations.
- (2) The permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The permittee may petition the Technical Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
- (3) The permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for the facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that the permittee may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation

are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this **Condition E18-14(3)**, as long as the power provided by the financial arrangement is limited to emergency power.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §63.6640(f)

Compliance Method: Compliance is demonstrated by the log of emergency generator operating hours required by **Condition E18-17**.

E18-14(SM1). The following engines driving emergency generators and fire pumps are subject to regulations under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Pursuant to 40 CFR §63.6645(d), the permittee is required to submit an Initial Notification but is otherwise not affected by the requirements of 40 CFR Part 63, Subpart ZZZZ, in accordance with 40 CFR §63.6590(b), the permittee's notification should include the information in 40 CFR §63.9(b)(2)(i) through (v), and a statement that the permittee's stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §63.6645(d)

E18-15(SM1). Visible emissions from this source shall not exceed the limitation in **Condition E3-8.a)**.

Compliance Method: As specified in **Condition E3-8.a)**

E18-16(SM1). For fee purposes, when paying fees on an actual emissions basis, the permittee shall calculate its annual actual oxides of nitrogen (NOx) emissions, particulate matter (PM) emissions, sulfur dioxide (SO₂) emissions, volatile organic compound (VOC) emissions, and hazardous air pollutants (HAPs) from emergency generator engines and emergency fire pump engines at this source using appropriate emission factors supplied by the equipment vendor or those found in EPA AP-42, or a combination of both, in conjunction with hours of operation of each engine. The results of these calculations shall be recorded and maintained in tabular form (see example below) and shall be retained for a period of not less than five (5) years.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(b)1

Annual Accounting Period log of emissions from emergency diesel engines (01-0020-100)			
Engine _____	From (Month/Year) _____	to (Month/Year) _____	
Emissions from emergency generator engines and fire pump engines			
Pollutant	Operating time (hr)	Emission Factor (g/hp-hr or lb/hp-hr)	Emissions (tons)
NOx			
SO2			
PM			
VOC (NMHC)			
HAPs			

E18-17. The permittee shall keep a record of operating hours of each engine for each month and each calendar year at this source, in a form that readily provides the information required in the following table and shows compliance with **Conditions E18-10(SM1) and E18-13(SM1)** of this permit. All data, including all required calculations, must be entered in the log no later than thirty (30) days from the end of the month for which the data is required. The permittee shall retain this record at the source location for a period of not less than five (5) years and keep this record available for inspection by the Technical Secretary or a Division representative.

Table 1					
Engine:			Year:		
Non-Emergency Operating Hours per Month					
Month	Maintenance Checks & Readiness Testing	Other Non-emergency Operation	TOTAL non-emergency operation *	Emergency Operating Hours per Month	Comments **
January					

February					
etc.					
Totals					
*	The total hours per month of non-emergency operation are the sum of the hours per month of Maintenance Checks & Readiness Testing plus the hours per month of Other Non-emergency Operation.				
**	The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation.				

E18-18(SM1). The permittee shall certify the start-up date of each Uranium Processing Facility operation and each engine from this source by submitting the completed startup certification in Attachment #4 of this permit to the Permitting Program at the address listed below or via e-mail, no later than thirty (30) days after each Uranium Processing Facility operation and each engine is started-up. A separate startup certification must be submitted for each startup date, all sources started up on the same date may be listed in a single startup certification.

E18-19(SM1). The permittee has designated the emergency generator engines and fire pumps engines of this source as emergency engines. According to a memorandum dated September 6, 1995 from John Seitz, Director, Office of Air Quality Planning and Standards, "EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions." This value (500 hours) will be assumed to be the maximum operating hours per calendar year for this source, for the purpose of establishing a "potential to emit" for each pollutant of concern for the source, as specified in **Conditions E18-10(SM1) and E18-13(SM1)** of this permit. The 500-hour value includes the 100 hours per year for maintenance checks and readiness testing as specified in **Conditions E18-10(SM1) and E18-13(SM1)** of this permit. In the event that a unit operates more than 500 hours during a period of a calendar year, the total annual hours of operation shall be reported to the Technical Secretary within 30 days of the end of the calendar year, along with the amount of fuel used, and actual emissions from this unit.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

Compliance Method: Compliance is demonstrated by the log of emergency generator operating hours required by **Condition E18-17**.

E18-20(SM1). Carbon monoxide (CO) emitted by the fire pump IC engines shall not exceed 0.77 tons during any period of 12 consecutive months.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: The potential CO emissions from this source are less than 5 tons per year. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related recordkeeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii) and 1200-03-10-.04(2)(b)(1), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3(i).

E18-21(SM1). Carbon monoxide (CO) emitted by this source, not including the emergency generator and fire pump engines, shall not exceed 6.9 tons during any period of 12 consecutive months.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2) and the applications with dates March 22, 2018 and May 24, 2018

Compliance Method: Compliance with this limitation is assured based on the source's potential to emit information presented in the application with date March 22, 2018.

E18-22(SM1). A non-resettable hour meter must be installed prior to startup of any engine that does not meet the standards applicable to non-emergency engines.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4209(a)

Compliance Method: Compliance shall be demonstrated by the installation of the non-resettable hour meter if required.

E18-23(SM1). For any engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8), 40 CFR §60.4209(b)

Compliance Method: Compliance shall be demonstrated by the installation of the backpressure monitor if required.

Building 9998 Complex Uranium Processes

(Emission Source Reference Numbers 01-0020-13, 01-1020-12)

Buildings 9215 and 9998 are referred to as the Building 9215 Complex. Building 9998 contains H-2 inspection, machining, and storage area, H-1 Foundry (casting of DU, DU alloys, and nonradiological materials using induced melting and arc melting processes), and a research and development area. The F-Area/A-Wing operations include metal forming, heat treating, and arc melting of DU, DU alloys, and nonradiological materials.

01-0020-13

Building 9998

-A(60, 61, 62, 64, 813)

Foundry Operations

Consist of casting, pickling, and swaging of uranium, sintering and swaging of tungsten metals, and processing of carbon and furnace refractories.

Conditions E19-1 through E19-4 apply to source 01-0020-13

E19-1. This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E19-2. Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured for emission points 60 and 61.

Tenn. Comp. R. & Regs. 1200-03-11-.08 and 40 CFR 61.93

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E19-3. For fee purposes, nitrogen oxide emissions are 6.13 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E19-4. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-12 Building 9998 -F(143)	Metal Forming & Heat Treating Operation This process includes a metal press, forming equipment, heating furnaces, salt bath and quench tank.
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Conditions E20-1 through E20-4 apply to source 01-1020-12

E20-1. This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E20-2. Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 and 40 CFR 61.93

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E20-3. For fee purposes, volatile organic compound emissions are 1.1 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E20-4. Visible emissions from this source shall not exceed 20 percent opacity as determined by EPA Method 9 in the current 40 CFR 60, Appendix A. (6 minute average)

Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-71 Building 9204-2 -B(313, 314, 317, 318)	Lithium Electrolytic Cell Process This source produces lithium metal ingots from lithium chloride. One by-product, chlorine, is scrubbed with sodium hydroxide before discharge.
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Conditions E21-1 through E21-4 apply to source 01-0020-71

E21-1. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot (0.90 lbs/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from source.

E21-2. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

E21-3. For fee purposes, chlorine emissions are 3.0 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E21-4. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-57 Building 9204-2 -D(342, 344, 345, 346, 347, 349, 350)	This emission source is a lithium chloride operation (wet chemistry) where lithium hydroxide and hydrochloric acid react to form lithium chloride. Unit operations include neutralization, evaporation and crystallization.
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Conditions E22-1 through E22-4 apply to source 01-1020-57

E22-1. Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot (1.0 lbs/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-3-9-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-3-9-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from this source.

- E22-2.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

- E22-3.** Visible emissions shall not exceed 20% opacity (aggregate count). Visible emissions from stacks will be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii)

- E22-4.** For fee purposes, gaseous HAP emissions are 4.0 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

01-1020-55 Building 9204-2 E(357, 359, 361, 363, 364)	This emission source is a lithium forming and fabrication operation (dry chemistry). Various lithium compounds, such as lithium hydride/deuteride are produced.
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Conditions E23-1 through E23-3 apply to source 01-1020-55

- E23-1.** Particulate matter emitted from this source shall not exceed 0.02 grains per dry standard cubic foot (0.37 lbs/hr).

Tenn. Comp. R. & Regs. 1200-03-07-.04

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from this source.

- E23-2.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

- E23-3.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source will be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-55 Building 9204-2 E1(351, 358, 360, 362)	This emission source is a lithium forming and fabrication operation (special materials).
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Conditions E24-1 through E24-3 apply to source 01-1020-55

- E24-1.** Particulate matter emitted from this source shall not exceed 0.08 lbs/hr.

Tenn. Comp. R. & Regs. 1200-03-07-.04

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3(i). The permittee shall submit annually a compliance certification for particulate matter from this source.

- E24-2.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

- E24-3.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source will be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-79 Building 9204-2 -G(371, 372)	Lithium Machine Shop This emission source is a lithium machine shop where ceramic parts are machined. Ceramic parts include but not limited to such material as diallylphthalate, lithium hydride/deuteride, plastics, etc.
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Conditions E25-1 through E25-3 apply to source 01-1020-79

E25-1. Particulate matter emitted from this source shall not exceed 0.71 lbs/hr.

Tenn. Comp. R. & Regs. 1200-03-07-.04

Compliance Method: The potential to emit particulate matter from this source is less than five tons per year. In accordance with TAPCD 1200-03-09-.04(5)(c)3. and by annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1.(iii), and the compliance requirements of Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)3.(i). The permittee shall submit annually a compliance certification for particulate matter from source.

E25-2. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15.**

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15.**

E25-3. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-68 Building 9204-2E -A(101)	Assembly / Disassembly Operations This emission source is a disassembly and storage operation consisting of grinding and machining
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Conditions E26-1 through E26-5 apply to source 01-0020-68

E26-1. This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1).**

- E26-2.** Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

- E26-3.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

- E26-4.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

- E26-5.** This source is a part of the grouped Beryllium sources which are required to meet the ten (10) grams per twenty-four (24) hour period beryllium emission limit as stated in **Condition E3-14(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-11-.03(3)(a) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-14(SM1)**.

01-0020-03 Building 9206 -B(13)	Enriched Uranium Recovery Process This emission source is a chemical process used to recover uranium from salvage materials.
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Conditions E27-1 through E27-5 apply to source 01-0020-03

- E27-1.** This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

- E27-2.** Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196*, Rev. 1 *Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

- E27-3.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

- E27-4.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

- E27-5.** For fee purposes, nitrogen oxide emissions are 1.63 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

<p>01-1020-72 Building 9212 -A(28, 33, 40, 112, 134, 432, 518)</p>	<p>Enriched Uranium Process This emission source is a chemical process used to recover uranium from salvage materials. Minor Modification #2: Add a Calciner Process Operation to Stack 134 of Emission Source Y-9212-A as a result of permittee request dated August 29, 2018</p>
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Conditions E28-1 through E28-6 apply to source 01-1020-72

- E28-1.** This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E28-2. For fee purposes, nitrogen oxide emissions are 58.5 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E28-3. For fee purposes, volatile organic compound emissions are 9.1 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E28-4. Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured for emission points 28, 33, 40, 112, and 134.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196*, Rev. 1 *Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E28-5. For fee purposes, gaseous HAP emissions are 30 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

E28-6. Visible emissions from this source shall not exceed 20 percent opacity as determined by EPA Method 9 in the current 40 CFR 60, Appendix A. (6 minute average)

Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-02 Building 9212 -B(38, 48, 110)	Enriched Uranium Process This emission source is a uranium/uranium alloy metal casting and recovery of metallic uranium/uranium alloy scrap.
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Conditions E29-1 through E29-5 apply to source 01-0020-02

E29-1. This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E29-2. For fee purposes, miscellaneous volatile organic compound emissions are 14.52 tons per annual accounting period and nitrogen oxide emissions are 0.22 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

- E29-3.** Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

- E29-4.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

- E29-5.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

<p>01-0020-05 Building 9212 -C(26, 45, 46, 47, 113, 114, 128, 290)</p>	<p>Enriched Uranium Process Special processing where uranium and uranium-contaminated scrap is treated to recover uranium, perform accountability, and produce special oxide</p> <p>Minor Modification #1: Stack 44 process equipment has been removed from operation as a result of permittee request dated November 16, 2017</p>
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Conditions E30-1 through E30-6 apply to source 01-0020-05

- E30-1.** This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

- E30-2.** For fee purposes, nitrogen oxide emissions are 99 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-3-26-.02(2)(d)3

E30-3. For fee purposes, gaseous HAP emissions are 1 ton per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9)(b)1

E30-4(MM1). Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured for emission points 26, 45, 47, 113, and 114.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E30-5. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

E30-6. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

Building 9215 Complex Uranium Processes**(Emission Source Reference Numbers 01-0020-37, 01-1020-51, 01-1020-52, 01-1020-53)**

Buildings 9215 and 9998 are referred to as the Building 9215 Complex. The Building 9215 Complex currently provides storage and handling of enriched uranium inventories; aids in the dismantlement of weapons; provides fabricated metal shapes as needed for weapon stockpile maintenance; and supports nuclear energy programs at other U.S. and foreign facilities. Operations in both buildings include the handling, packaging, and transport of uranium materials and parts in support of the activities within the process areas.

Operations performed in the Building 9215 Complex are rolling and forming in O-Wing and machining of HEU parts in M-Wing. Third Mill operations include salt-bath, heat treating, rolling, shearing, and plate cutting of DU, DU alloys, and nonradiological materials. Arc melt operations include sawing, skull casting, and vacuum arc remelting of DU and DU alloys. P-Wing operations include forming, heat treating, and rolling of DU, DU alloys, and nonradiological materials..

01-0020-37
Building 9215
-A(3)

Uranium Processes - Machine Shop

Machine shop containing miscellaneous machines used in the fabrication of enriched uranium or uranium alloy parts.

Conditions E31-1 through E31-5 apply to source 01-0020-37

- E31-1.** This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

- E31-2.** Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document entitled *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

- E31-3.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

- E31-4.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

E31-5. For fee purposes, miscellaneous volatile organic compound emissions are 5.41 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

01-1020-51 Building 9215 -B(1, 4)	Uranium Processes - Machine Shop This emission source is a metal working operations which include forming presses, rolling mills, a lathe, furnaces, shears, and salt baths.
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Conditions E32-1 through E32-4 apply to source 01-1020-51

E32-1. This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

E32-2. Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

E32-3. This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

E32-4. Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-52 Building 9215 -C(6, 7)	Uranium Processes - Machine Shop These operations include but are not limited to rolling and forming mills, presses, electric furnace, and lathe. Materials processed are depleted uranium metals and alloys, lead, tantalum, aluminum, niobium, iridium
--	---

Conditions E33-1 through E33-5 apply to source 01-1020-52

- E33-1.** This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

- E33-2.** Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016) Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

- E33-3.** This source is a part of the grouped sources using solvent 140 or solvent 142 which are subject to the VOC emission limit in **Condition E3-15**.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: As described under **Condition E3-15**.

- E33-4.** For fee purposes, volatile organic compound emissions are 1.1 tons per annual accounting period.

Tenn. Comp. R. & Regs. 1200-03-26-.02(2)(d)3

- E33-5.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-1020-53 Building 9215 -D(9, 10, 11, 12)	Uranium Processes - Machine Shop This metal working facility includes rolling mills, shears, electric furnace, lathes, and salt baths. Materials processed are depleted uranium metals and alloys, lead, titanium, tantalum, aluminum, and stainless steel.
---	---

Conditions E34-1 through E34-3 apply to source 01-1020-53

- E34-1.** This source is a part of the grouped radionuclides sources which are required to meet the National Emission Standard for Hazardous Air Pollutants (NESHAP) 10 mrem per year dose standard as stated in **Condition E3-11(SM1)** in lieu of TDEC Rule 1200-03-07 process weight based standards. For the purpose of paying fees only, a particulate emissions allowable of 2,000 pounds per year has been set for these combined sources.

Tenn. Comp. R. & Regs. 1200-03-26-.02(9) and Title V Application Streamlined Alternate Emission Limit

Compliance Method: As described under **Condition E3-11(SM1)**.

- E34-2.** Effluent flow rate measurements shall be made and radionuclides shall be directly monitored or extracted, collected and measured for emission points 11 and 12.

Tenn. Comp. R. & Regs. 1200-03-11-.08 (40 CFR 61.93)

Compliance Method: Stack emissions monitoring and flow rate measurements shall be made in accordance with the procedures described in the EPA approved document *DOE/ORO/2196, Rev. 1 Compliance Plan – National Emission Standards For Hazardous Air Pollutants For Airborne Radionuclides On The Oak Ridge Reservation, Oak Ridge, Tennessee, dated April 4, 2013* (included in the Title V permit renewal application dated July 6, 2016). Results of these measurements shall be reported annually in the Oak Ridge Reservation Radionuclide NESHAP Annual Emissions Report.

- E34-3.** Visible emissions from this source shall not exceed 20% opacity (aggregate count). Visible emissions from stacks from this source shall be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.

Tenn. Comp. R. & Regs. 1200-03-05-.01

Compliance Method: Compliance with this emission limitation shall be certified through utilization of the Division's Opacity Matrix dated June 18, 1996, and amended September 11, 2013. (Attachment #1)

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(11)(e)1(iii)

01-0020-27 Building 9225-3 -A(1144)	Special Materials Facility This emission source is a special materials purification facility. The source will consist of purification, crushing and dissolving, filtering, crystallizing, mold loading/crushing/grinding, and vapor recovery.
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Conditions E35-1 through E35-3 apply to source 01-0020-27

- E35-1.** Volatile organic compounds (VOC) emitted from this source shall not exceed 9.0 tons during any period of twelve (12) consecutive months.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

Compliance Method: The permittee shall calculate the actual quantity of VOC emitted from this facility during each calendar month and maintain records of these emissions in a form that readily shows compliance with **Condition E38-1** of this permit (see example below). This log must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

VOC Emissions ± Monthly Log

Process Materials	Material Usage (gallons)	VOC Content (lb/gallon)	Material Recovered (gallons)	VOC Emissions ¹ (tons)
Acetonitrile				
Isopropyl Alcohol				
etc.				
Current Month Total				
VOC Emitted ² (tons/12 months)				

¹ VOC Emissions are calculated by the equation shown below:

$$\text{VOC Emissions (tons)} = \frac{[\text{Material Usage (gallons)} - \text{Material Recovered (gallons)}] (\text{VOC Content (lb/gallon)})}{2,000 \text{ lb/ton}}$$

² The tons/12 month value is the sum of the VOC emissions in the 11 months preceding the month just completed + the VOC emissions in the month just completed (Current Month Total).

- E35-2.** Material Safety Data Sheets (MSDS) or manufacturer or vendor formulation data for each VOC-containing material used shall be maintained at the source location and made available for inspection by the Technical Secretary or his representative, beginning 180 days from the issue date of this permit. If new materials are used, or if material formulation is changed, the records shall be updated within 90 days of the initial date of usage of the new or altered material.

Tenn. Comp. R. & Regs. 1200-03-07-.07(2)

- E35-3.** Visible emissions from this source shall not exceed 20 percent opacity as determined by EPA Method 9 in the current 40 CFR 60, Appendix A. (6 minute average)

Tenn. Comp. R. & Regs. 1200-03-05-.03(6)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996, and amended September 11, 2013, that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

Tenn. Comp. R. & Regs. 1200-03-09-.02(1)(e)1(iii)

END OF SIGNIFICANT MODIFICATION #1 TO PERMIT NUMBER: 571832

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ATTACHMENT #1

**OPACITY MATRIX DECISION TREE for
VISIBLE EMISSION EVALUATION METHODS 2 & 9
Dated JUNE 18, 1996, Amended September 11, 2013**

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**Decision Tree PM for Opacity for
Sources Subject to Rule 1200-03-05-.01
Utilizing TVEE Method 2**

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standard in Rule 1200-03-05-.01. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PMT required.

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing Tennessee Visible Emission Evaluation Method 2. The observer must be properly certified according to the criteria specified in EPA Method 9 to conduct TVEE Method 2 evaluations.

Typical Pollutants
Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

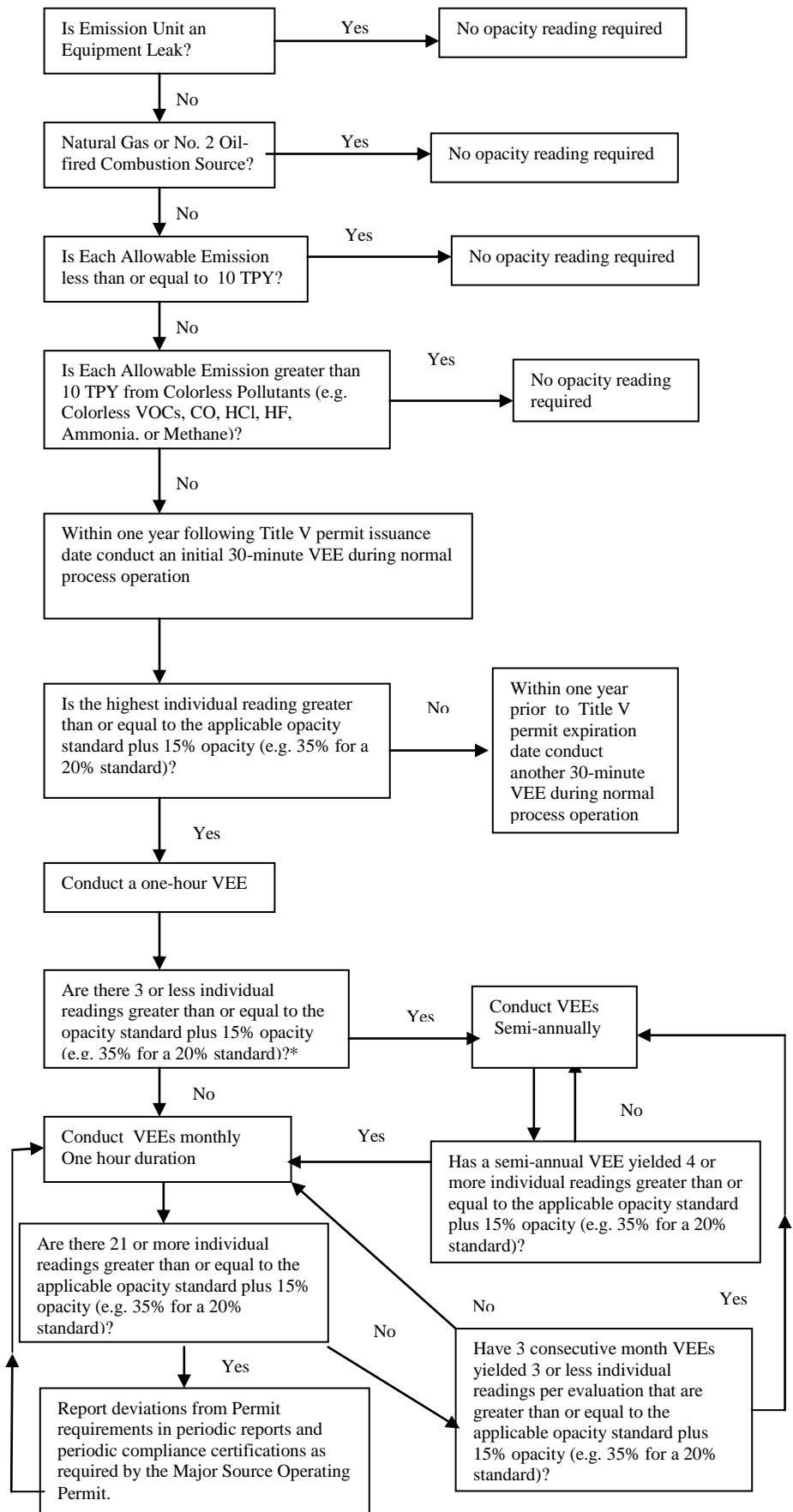
A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

Reader Error
TVEE Method 2: The TAPCD declares non-compliance when 21 observations are read at the standard plus 15% opacity (e.g. 35% for a 20% standard).

*The rationale for this is the fact that Rule 1200-03-05-.01 allows for an exemption of 5 minutes (20 readings) per hour and up to 20 minutes (80 readings) per day. With 4 or more excessive individual readings per hour the possibility of a daily exceedance exists.

Note: A company could mutually agree to have all of its sources regulated by EPA Method 9. Caution: Agreement to use Method 9 could potentially place some sources in non-compliance with visible emission standards. Please be sure before you agree.

Dated June 18, 1996
Amended September 11, 2013



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Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(c)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants
Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

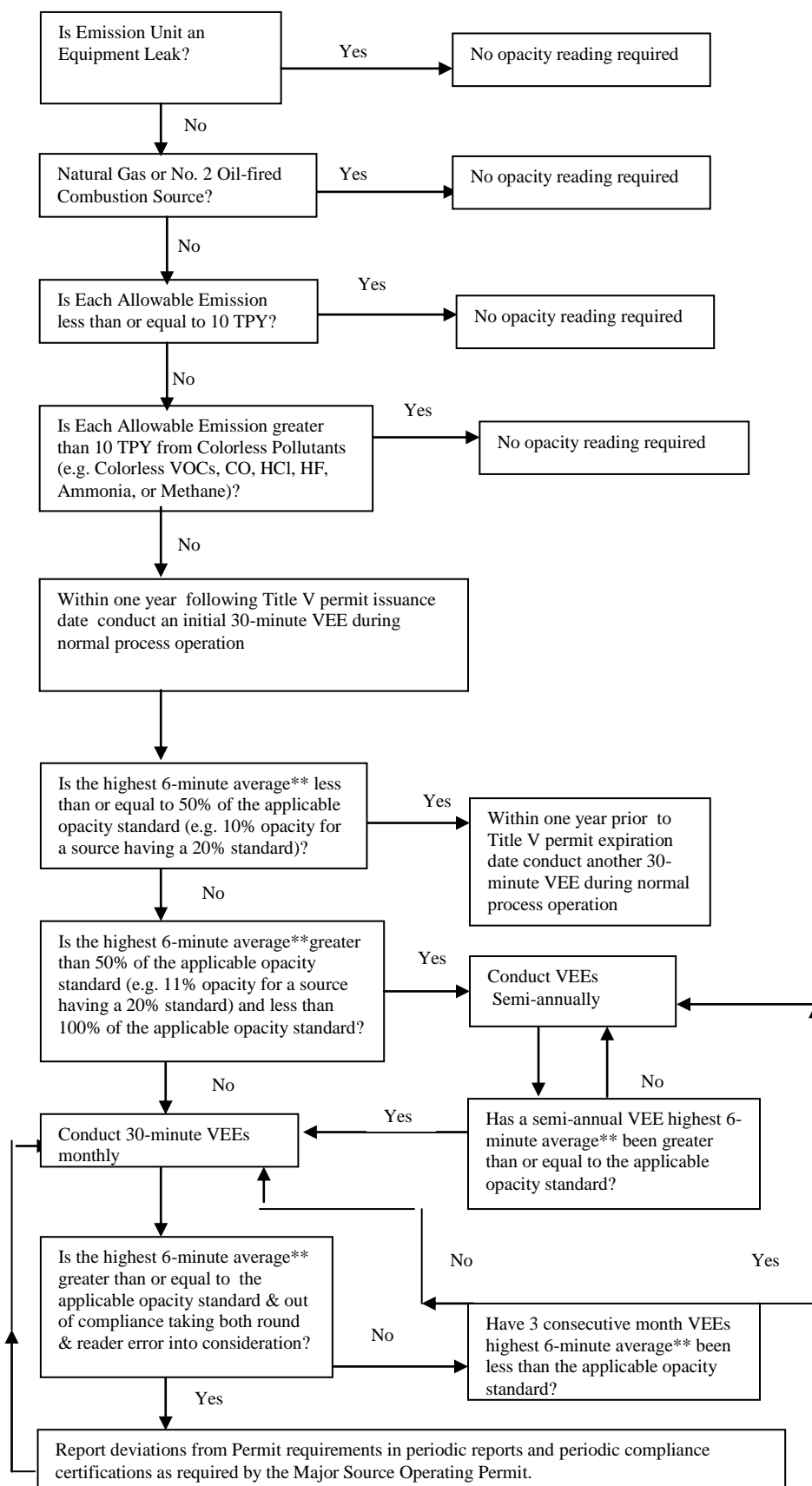
Reader Error
EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:
The TAPCD guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards:
EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996
Amended September 11, 2013



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Permit Number 562767

Expiration Date: January 8, 2017

ATTACHMENT #2

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Table 1.3-1. CRITERIA POLLUTANT EMISSION FACTORS FOR FUEL OIL COMBUSTION^a

Firing Configuration (SCC) ^a	SO ₂ ^b		SO ₃ ^c		NO _x ^d		CO ^e		Filterable PM ^f	
	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING
Boilers > 100 Million Btu/hr										
No. 6 oil fired, normal firing (1-01-004-01), (1-02-004-01), (1-03-004-01)	157S	A	5.7S	C	47	A	5	A	9.19(S)+3.22	A
No. 6 oil fired, normal firing, low NO _x burner (1-01-004-01), (1-02-004-01)	157S	A	5.7S	C	40	B	5	A	9.19(S)+3.22	A
No. 6 oil fired, tangential firing, (1-01-004-04)	157S	A	5.7S	C	32	A	5	A	9.19(S)+3.22	A
No. 6 oil fired, tangential firing, low NO _x burner (1-01-004-04)	157S	A	5.7S	C	26	E	5	A	9.19(S)+3.22	A
No. 5 oil fired, normal firing (1-01-004-05), (1-02-004-04)	157S	A	5.7S	C	47	B	5	A	10	B
No. 5 oil fired, tangential firing (1-01-004-06)	157S	A	5.7S	C	32	B	5	A	10	B
No. 4 oil fired, normal firing (1-01-005-04), (1-02-005-04)	150S	A	5.7S	C	47	B	5	A	7	B
No. 4 oil fired, tangential firing (1-01-005-05)	150S	A	5.7S	C	32	B	5	A	7	B
No. 2 oil fired (1-01-005-01), (1-02-005-01), (1-03-005-01)	142S ^h	A	5.7S	C	24	D	5	A	2	A
No. 2 oil fired, LNB/FGR, (1-01-005-01), (1-02-005-01), (1-03-005-01)	142S ^h	A	5.7S	A	10	D	5	A	2	A

Table 1.3-1. (cont.)

Firing Configuration (SCC) ^a	SO ₂ ^b		SO ₃ ^c		NO _x ^d		CO ^e		Filterable PM ^f	
	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING
Boilers < 100 Million Btu/hr										
No. 6 oil fired (1-02-004-02/03) (1-03-004-02/03)	157S	A	2S	A	55	A	5	A	9.19(S)+3.22 ⁱ	B
No. 5 oil fired (1-03-004-04)	157S	A	2S	A	55	A	5	A	10 ⁱ	A
No. 4 oil fired (1-03-005-04)	150S	A	2S	A	20	A	5	A	7	B
Distillate oil fired (1-02-005-02/03) (1-03-005-02/03)	142S	A	2S	A	20	A	5	A	2	A
Residential furnace (A2104004/A2104011)	142S	A	2S	A	18	A	5	A	0.4 ^g	B

a To convert from lb/103 gal to kg/103 L, multiply by 0.120. SCC = Source Classification Code.

b References 1-2,6-9,14,56-60. S indicates that the weight % of sulfur in the oil should be multiplied by the value given. For example, if the fuel is 1% sulfur, then S = 1.

c References 1-2,6-8,16,57-60. S indicates that the weight % of sulfur in the oil should be multiplied by the value given. For example, if the fuel is 1% sulfur, then S = 1.

d References 6-7,15,19,22,56-62. Expressed as NO₂. Test results indicate that at least 95% by weight of NO_x is NO for all boiler types except residential furnaces, where about 75% is NO. For utility vertical fired boilers use 105 lb/103 gal at full load and normal (>15%) excess air. Nitrogen oxides emissions from residual oil combustion in industrial and commercial boilers are related to fuel nitrogen content, estimated by the following empirical relationship: lb NO₂/103 gal = 20.54 + 104.39(N), where N is the weight % of nitrogen in the oil. For example, if the fuel is 1% nitrogen, then N = 1.

e References 6-8,14,17-19,56-61. CO emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well maintained.

f References 6-8,10,13-15,56-60,62-63. Filterable PM is that particulate collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train. Particulate emission factors for residual oil combustion are, on average, a function of fuel oil sulfur content where S is the weight % of sulfur in oil. For example, if fuel oil is 1% sulfur, then S = 1.

g Based on data from new burner designs. Pre-1970's burner designs may emit filterable PM as high as 3.0 lb/103 gal.

h The SO₂ emission factor for both no. 2 oil fired and for no. 2 oil fired with LNB/FGR is 142S, not 157S. Errata dated April 28, 2000. Section corrected May 2010.

i The PM factors for No.6 and No. 5 fuel were reversed. Errata dated April 28, 2000. Section corrected May 2010.

Table 1.3-2. CONDENSABLE PARTICULATE MATTER EMISSION FACTORS FOR OIL COMBUSTION^a

Firing Configuration ^b (SCC)	Controls	CPM - TOT ^{c,d}		CPM - IOR ^{c,d}		CPM - ORG ^{c,d}	
		Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING
No. 2 oil fired (1-01-005-01, 1-02-005-01, 1-03-005-01)	All controls, or uncontrolled	1.3 ^{d,e}	D	65% of CPM-TOT emission factor ^e	D	35% of CPM-TOT emission factor ^e	D
No. 6 oil fired (1-01-004-01/04, 1-02-004-01, 1-03-004-01)	All controls, or uncontrolled	1.5 ^f	D	85% of CPM-TOT emission factor ^d	E	15% of CPM-TOT emission factor ^d	E

^a All condensable PM is assumed to be less than 1.0 micron in diameter.

^b No data are available for numbers 3, 4, and 5 oil. For number 3 oil, use the factors provided for number 2 oil. For numbers 4 and 5 oil, use the factors provided for number 6 oil.

^c CPM-TOT = total condensable particulate matter.

CPM-IOR = inorganic condensable particulate matter.

CPM-ORG = organic condensable particulate matter.

^d To convert to lb/MMBtu of No. 2 oil, divide by 140 MMBtu/10³ gal. To convert to lb/MMBtu of No. 6 oil, divide by 150 MMBtu/10³ gal.

^e References: 76-78.

^f References: 79-82.

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO)
FROM NATURAL GAS COMBUSTION^a

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO _x ^b		CO	
	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
Large Wall-Fired Boilers (≥100) [1-01-006-01, 1-02-006-01, 1-03-006-01] Uncontrolled (Pre-NSPS) ^c Uncontrolled (Post-NSPS) ^c Controlled - Low NO _x burners Controlled - Flue gas recirculation	280 190 140 100	A A A D	84 84 84 84	B B B B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03] Uncontrolled Controlled - Low NO _x burners Controlled - Low NO _x burners/Flue gas recirculation	100 50 32	B D C	84 84 84	B B B
Tangential-Fired Boilers (All Sizes) [1-01-006-04] Uncontrolled Controlled - Flue gas recirculation	170 76	A D	24 98	C D
Residential Furnaces (<0.3) [No SCC] Uncontrolled	94	B	40	B

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

^b Expressed as NO_x. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_x emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_x emission factor.

^c NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION^a

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
CO ₂ ^b	120,000	A
Lead	0.0005	D
N ₂ O (Uncontrolled)	2.2	E
N ₂ O (Controlled-low-NO _x burner)	0.64	E
PM (Total) ^c	7.6	D
PM (Condensable) ^c	5.7	D
PM (Filterable) ^c	1.9	B
SO ₂ ^d	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

^b Based on approximately 100% conversion of fuel carbon to CO₂. CO₂[lb/10⁶ scf] = (3.67) (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10⁴ lb/10⁶ scf.

^c All PM (total, condensable, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensable PM. Condensable PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

^d Based on 100% conversion of fuel sulfur to SO₂. Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ scf.

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ATTACHMENT #3

Insignificant Activities

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Attachment 2 to Form APC 2

The following activities are insignificant because of TDEC Rule 1200-3-9-.04(5)(a)4(iv) which states, "Any emission unit with the potential to emit radionuclides which result in a dose to the most exposed member of the public of less than 0.1 millirem per year. Such emission unit must be listed in the permit application."

INSIGNIFICANT ACTIVITIES

Source Number	Description	Regulation
Y-9202-EX	Miscellaneous Research and Development Processes (including Stack 104, 105, 106, 107)	1200-3-9-.04(5)(a)4(iv)
Y-9204-2-EX-K	Wet Chemistry Generator Vessels	1200-3-9-.04(5)(a)4(iv)
Y-9204-2E-EX-B	Manual Metal Cutting Glove Box	1200-3-9-.04(5)(a)4(iv)
Y-9204-2E-EX-D	Dismantlement/Disassembly Operation: Linear and Octagonal Glove Boxes	1200-3-9-.04(5)(a)4(iv)
Y-9204-2E-EX-E	Wachs Cutter Process	1200-3-9-.04(5)(a)4(iv)
Y-9204-2E-EX-K	Walk-in Hood	1200-3-9-.04(5)(a)4(iv)
Y-9206-EX-K	Hood 34 Operation	1200-3-9-.04(5)(a)4(iv)
Y-9212-A2-EX-J	Wet Blasting Operation	1200-3-9-.04(5)(a)4(iv)
Y-9212-A2-EX-K	Welding Box (Glove Box)	1200-3-9-.04(5)(a)4(iv)
Y-9212-A2-EX-N	Abrasive Saw and Crucible Cleaner	1200-3-9-.04(5)(a)4(iv)
Y-9212-A2-EX-P	Grit/Sand Blaster	1200-3-9-.04(5)(a)4(iv)
Y-9212-A2-EX-Q	Vacuum Homogenization and Quench (heat treat) Furnaces	1200-3-9-.04(5)(a)4(iv)
Y-9215-EX-M	Hydroform Exhaust	1200-3-9-.04(5)(a)4(iv)
Y-9215-EX-L	Rolling Mill	1200-3-9-.04(5)(a)4(iv)
Y-9215-EX-P	ABAR and VFS Vacuum Furnaces	1200-3-9-.04(5)(a)4(iv)
Y-9422-22-EX-C	EEVOC Plume Treatment/Air Stripper	1200-3-9-.04(5)(a)4(iv)

Attachment 2 to Form APC 2

Y-9616-7-EX-B	WETF Degassifier Unit	1200-3-9-.04(5)(a)4(iv)
Y-9720-5-EX-B	Packing and Sampling Glove Box	1200-3-9-.04(5)(a)4(iv)
Y-9805-1-EX-A	Deuterium Gas Production Process	1200-3-9-.04(5)(a)4(iv)
Y-9998-EX-G3	G3 Machine Shop	1200-3-9-.04(5)(a)4(iv)

ATTACHMENT #4

Startup Certification

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Start Up Certification – submit one for each source requiring a start up notification included in this permit

Start Up Certification for Source 01-0020-100

The permittee shall certify the initial start-up date(s) of the new or modified air contaminant source(s) regulated by this permit by submitting

A COPY OF THE FRONT PAGE OF THIS PERMIT, and
A COPY OF THIS PAGE OF THIS PERMIT
(01-0020-100 - Building 9226/9226-01/9424-04)

with the information required in the table(s) below completed, to the Technical Secretary's representatives listed below:

Operation	Start-up date (MM/DD/YYYY)	Anticipated operating rate (Percent of maximum rated capacity)
Assembly		
Disassembly		
Quality Evaluation		
Product certification		
Casting		
Rolling and Forming		
Machining		
Turnings Cleaning & Conversion		
Analytical Services		
Special Oxide		
EU Purification		
Chemical Recovery		
Process Support Facility		

Engine start-up date (MM/DD/YYYY)	Engine Manufacturer	Engine Model Number	Engine Model Year	Engine Output (kW/bhp)	EPA Tier Certified	EPA Certificate number	Generator Output (kW)

For the purpose of complying with this condition, "initial start-up" of the air contaminant source shall be the date the new or modified source began operation for the production of product for sale, use as raw materials, or steam or heat production under the terms of this permit.

The undersigned affirms that this person has the full authority to represent and bind the permittee in environmental permitting affairs. The undersigned further affirms that the above provided information is true to the best of his/her knowledge and belief.

Signature		Date
Signer's name (type or print)	Title	Phone (with area code)

Note: This certification is not an application for an operating permit. At a minimum, the appropriate application form, usually an APC Index and an APC 1, must be submitted requesting an operating permit. The application must be submitted in accordance with the requirements of this permit.

The completed certification shall be submitted to the Permit Program at the address listed below or via e-mail, no later than thirty (30) days after the air contaminant source is started-up.

Tennessee Department of Environment and Conservation
Attn: Permit Program
Division of Air Pollution Control
William R. Snodgrass TN Tower, 15th Floor
312 Rosa L. Parks Avenue
Nashville, TN 37243

or Adobe Portable Document Format (PDF)
Copy to: Air.Pollution.Control@TN.gov

Tenn. Comp. R. & Regs. 1200-03-09-.02(3)(b)

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ATTACHMENT #5

General Provisions for 40 CFR Part 60 Subpart IIII

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For sources in this permit that are subject to the requirements of 40 CFR part 60 subpart IIII, the permittee is required to comply with the following General Provisions of the federal Standards of Performance for New Stationary Sources [commonly known as New Source Performance Standards (NSPS)]:

General provisions citation 40 CFR	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of ≥ 30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of ≥ 30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

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ATTACHMENT #6

General Provisions for 40 CFR Part 61 Subpart H

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For sources in this permit that are subject to the requirements of 40 CFR part 61 subpart H, the permittee is required to comply with the following General Provisions of the federal National Emission Standards for Hazardous Air Pollutants (NESHAP):

General Provisions Citation 40 CFR	Subject of Citation	Applies to Subpart	Explanation
§61.01	Lists of Pollutants and Applicability of Part 61	Yes	Specifies that Part 61 applies to the owner or operator of any stationary source for which a standard is prescribed under Part 61.
§61.02	Definitions	Yes	Defines certain terms used throughout Part 61. 61.96(a) defines new construction for a facility that emits radionuclides.
§61.03	Units and Abbreviations	Yes	Defines certain abbreviations and symbols of units of measure used throughout Part 61.
§61.04	Address	Yes	Specifies to whom shall all requests, reports, applications, submittals, and other communications to the Administrator pursuant to Part 61 shall be submitted.
§61.05	Prohibited Activities	Yes	Prohibits the unapproved construction, modification or operation of sources subject to a Part 61 standard except under certain exemptions, prohibits the failure to report, revise reports, or report source test results as required under Part 61.
§61.06	Determination of Construction or Modification	Yes	Allows an owner or operator to submit a written application for a determination of whether actions constitute construction or modification, or commencement thereof, of a source subject to a standard, and specifies when the Administrator shall respond.
§61.07	Application for approval of Construction or Modification	Yes	Contains requirements for an owner or operator to submit an application for approval of the construction of any new source or modification of any existing source. 61.96(b) provides for certain exemptions from this requirement.
§61.08	Approval of Construction or Modification	Yes	Contains a timeline and requirements for notification of approval or intention to deny approval of construction or modification. 61.96(c) defines requirements for conditions to approvals granted.
§61.09	Notification of Startup	Yes	Contains requirements for an owner or operator to furnish a notification of initial startup prior to and after startup. 61.96(b) provides for certain exemptions from this requirement.
§61.10	Source Reporting and Waiver Request	No	61.97 exempts facilities subject to Subpart H from the requirements of 61.10.
§61.11	Waiver of Compliance	Yes	Specifies how a Waiver of Compliance may be granted in response to a request under 61.10.
§61.12	Compliance with Standards and Maintenance Requirements	Yes	Contains requirements for determination of compliance with numerical emission limits, design, equipment, work practice or operational standards, and maintenance requirements.
§61.13	Emission Tests and Waiver of Emission Tests	Yes	Contains requirements for emission testing when required by a Part 61 subpart.
§61.14	Monitoring Requirements	Yes	Contains requirements for monitoring system required under each Part 61 subpart which requires monitoring.
§61.15	Modification	Yes	Defines when a source is modified and the requirements that must be met.
§61.16	Availability of Information	Yes	Specifies how the availability to the public of information provided to, or otherwise obtained by, under part 61 shall be governed.
§61.17	State Authority	Yes	Part 61 does not preclude any State or political subdivision thereof from regulating sources subject to part 61 or requiring the owner or operator of a stationary source to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of the source.
§61.18	Incorporations by Reference	Yes	Specifies which materials are incorporated by reference in Part 61.

General Provisions Citation 40 CFR	Subject of Citation	Applies to Subpart	Explanation
§61.19	Circumvention	Yes	Prohibits an owner or operator from concealing an emission which would otherwise be a violation of a Part 61 applicable standard.

Tenn. Comp. R. & Regs. 1200-03-09-.03(8)

ATTACHMENT #7

General Provisions for 40 CFR Part 63 Subpart DDDDD

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For sources in this permit that are subject to the requirements of 40 CFR part 63 subpart DDDDD, the permittee is required to comply with the following General Provisions of the federal National Emission Standards for Hazardous Air Pollutants (NESHAP):

General Provisions Citation 40 CFR	Subject of Citation	Applies to Subpart	Explanation
§63.1	Applicability	Yes.	
§63.2	Definitions	Yes.	Additional terms defined in §63.7575
§63.3	Units and Abbreviations	Yes.	
§63.4	Prohibited Activities and Circumvention	Yes.	
§63.5	Preconstruction Review and Notification Requirements	Yes.	
§63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.	
§63.6(e)(1)(i)	General duty to minimize emissions.	No.	See §63.7500(a)(3) for the general duty requirement.
§63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.	
§63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.	
§63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.	
§63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.	
§63.6(g)	Use of alternative standards	Yes.	Except §63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2).
§63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No.	See §63.7500(a).
§63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	No.	Subpart DDDDD specifies opacity as an operating limit not an emission standard.
§63.6(i)	Extension of compliance	Yes.	Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§63.6(j)	Presidential exemption.	Yes.	
§63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart DDDDD specifies conditions for conducting performance tests at §63.7520(a) to (c).
§63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.	
§63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.	
§63.8(c)(1)	Operation and maintenance of CMS	Yes.	
§63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No.	See §63.7500(a)(3).
§63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.	

General Provisions Citation 40 CFR	Subject of Citation	Applies to Subpart	Explanation
§63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.	
§63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.	
§63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.	
§63.8(d)(3)	Written procedures for CMS	Yes.	Except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§63.8(e)	Performance evaluation of a CMS	Yes.	
§63.8(f)	Use of an alternative monitoring method.	Yes.	
§63.8(g)	Reduction of monitoring data	Yes.	
§63.9	Notification Requirements	Yes.	
§63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.	
§63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.	
§63.10(b)(2)(ii)	Recordkeeping of malfunctions	No.	See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions.
§63.10(b)(2)(iii)	Maintenance records	Yes.	
§63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.	
§63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.	
§63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.	
§63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.	
§63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.	
§63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No.	See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions.
§63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.	
§63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.	
§63.10(d)(1) and (2)	General reporting requirements	Yes.	
§63.10(d)(3)	Reporting opacity or visible emission observation results	No.	
§63.10(d)(4)	Progress reports under an extension of compliance	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	See §63.7550(c)(11) for malfunction reporting requirements.
§63.10(e)	Additional reporting requirements for sources with CMS	Yes.	

General Provisions Citation 40 CFR	Subject of Citation	Applies to Subpart	Explanation
§63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.	
§63.11	Control Device Requirements	No.	
§63.12	State Authority and Delegation	Yes.	
§63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.	
§63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.	

Tenn. Comp. R. & Regs. 1200-03-09-.03(8) and 40 CFR §63.7565